
SEWERAGE AND WATER BOARD

OF

NEW ORLEANS

SPECIFICATIONS FOR:

**RESTORATION OF GRAVITY FLOW SANITARY SEWERS BY EXCAVATION
AND REPLACEMENT FROM MANHOLE TO MANHOLE, CIPP LINING FROM
MANHOLE TO MANHOLE, CIPP LINING OF SERVICE LATERALS AND POINT
REPAIRS AT VARIOUS SITES THROUGHOUT THE CITY OF NEW ORLEANS**

CONTRACT NO. 30238

PROPOSALS TO BE OPENED

11:00 O'CLOCK A.M., LOCAL TIME ON SEPTEMBER 8, 2021

TABLE OF CONTENTS

PART I: PROCUREMENT

Advertisement.....	3
Instructions.....	4-9
Louisiana Uniform Public Work Bid Form & Unit Price Form.....	10-21
Affidavit.....	22
Voluntary Extensions of the Award.....	23
Bid Bond.....	24-25
Affidavit of Non-collusion.....	26
Contract.....	27-33
Payment & Performance Bond.....	34-36
Disadvantaged Business Enterprise Program.....	37-44

PART II: TECHNICAL SPECIFICATIONS

Technical Specifications Table of Contents.....	45
Section 1.....	46-52
Section 2.....	53-81
Section 3.....	82-85
Section 4.....	86-88
Section 5.....	89-91
Section 6.....	92-97
Section 7.....	98-104
Section 8.....	105-106
Section 9.....	107-119
Section 10.....	120-126
Section 11.....	127-131
Section 12.....	132-133
Section 13.....	134-135

**SEWERAGE AND WATER BOARD OF NEW ORLEANS
ADVERTISEMENT FOR CONTRACT 30238**

Sealed proposals will be received by the Sewerage and Water Board of New Orleans, at the office of its Purchasing Agent, Room 133, 625 St. Joseph Street, New Orleans, Louisiana, 70165, up to 11:00 o'clock AM Local Time, on **September 8, 2021** and publicly opened immediately thereafter, for:

**CONTRACT 30238
RESTORATION OF GRAVITY FLOW SANITARY SEWERS BY EXCAVATION AND REPLACEMENT FROM
MANHOLE TO MANHOLE, CIPP LINING FROM MANHOLE TO MANHOLE, CIPP LINING OF SERVICE
LATERALS AND POINT REPAIRS AT VARIOUS SITES THROUGHOUT THE CITY OF NEW ORLEANS**

Sealed Bids for construction of **Contract 30238**, addressed to **Sewerage and Water Board of New Orleans**, will be received at the office of the Purchasing Agent, Room 133, 625 St. Joseph Street, New Orleans, Louisiana 70165, until 11:00 o'clock a.m., local time, on **September 8, 2021**. Any Bids received after the specified time will not be considered.

Bids will then be publicly opened and read via teleconference. Access information:

Dial-in number: 504-224-8698

Conference ID: 762 565 701#

[Join via Microsoft Teams](#)

The Project contemplated consists of **Restoration of Gravity Flow Sanitary Sewer Mains by Point Repair at various sites Throughout Orleans Parish**. The Work will be completed in all respects within **365** calendar days from the date when the Contract Times commence to run.

Bidding Documents and proposal forms are available at no cost from Sewerage & Water Board of New Orleans' website: https://www2.swbno.org/business_bidspecifications.asp (Click on Doing Business, then Advertisements & Specifications)

Except for material suppliers, Bid Documents will be issued only to Contractors and/or Subcontractors who are licensed by the Louisiana State Licensing Board for Contractors, under Louisiana Revised Statutes 37:2150 through 37:2163 as amended, and who have furnished satisfactory evidence to the Purchasing Agent of the Board that they are licensed and are qualified to perform the work called for in the Contract Documents. Bids will be accepted from only those Contractors who possess a **Louisiana Contractor's License in Municipal and Public Works Construction**.

Each Bid **must** be submitted on the prescribed Bid Form and accompanied by Bid security as prescribed in the Instructions to Bidders. Envelopes containing bids and bid guarantee **must** be sealed, marked with the project name and with the Contractor's name as it appears on the license and the Louisiana Contractor's License number. The right is reserved to reject any and all bids or proposals for just cause. The Board also reserves the right to reject all proposals in the event that a formal agreement regarding funding from FEMA is not received prior to award of this Contract.

The Successful Bidder will be required to furnish the additional bond(s) and insurance prescribed in the Bidding Documents.

In order to perform public work, Bidder and Subcontractors shall hold all necessary licenses as required by the above referenced Louisiana Statutes.

A mandatory pre-bid conference will be held at **10:00 a.m.** local time on **August 27, 2021**. Bidders may attend this mandatory meeting via teleconference by joining the meeting via telephone with the following access information:

Dial-in number: 504-224-8698

Conference ID: 110 795 384#

[Join via Microsoft Teams](#)

Owner's right is reserved to reject all Bids or any Bid not conforming to the intent and purpose of the Bidding Documents.

SWBNO also uses LaPAC, the state's online electronic bid posting and notification system, in addition to its standard means of advertising this requirement: <https://wwwcfprd.doa.louisiana.gov/osp/lapac/dspBid.cfm?search=department&term=181>

Ghassan Korban
EXECUTIVE DIRECTOR

Robert Turner
GENERAL SUPERINTENDENT

INSTRUCTION FOR BIDDERS

1. DEFINED TERMS

- 1.1. Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- 1.1.1. *Issuing Office*—The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered: Purchasing Agent, Room 133, 625 St. Joseph Street, New Orleans, Louisiana 70165.

2. COPIES OF BIDDING DOCUMENTS

- 2.1. Complete sets of the Bidding Documents are available in electronic form on the Sewerage & Water Board of New Orleans website: https://www2.swbno.org/business_bidspecifications.asp (Click on Doing Business, then Advertisements & Specifications) Reproduction costs for any of the downloaded electronic Bidding Documents shall be borne by the Contractor.
- 2.2. Complete sets of Bidding Documents shall be used in preparing Bids. Neither Owner nor Engineer assumes responsibility for errors or misinterpretations resulting from use of incomplete sets of Bidding Documents.
- 2.3. Drawings included in the Bidding Documents are electronic .pdf files generated from electronic drawing files. Any reduction from actual size is indicated by a note or scale bar on Drawing.
- 2.4. Owner and Engineer, in making Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license or grant for any other use.

3. QUALIFICATIONS OF BIDDERS

- 3.1. In order to perform public work, Bidder and its Subcontractors, prior to award of Contract or as otherwise required by the jurisdiction, shall hold or obtain such licenses as required by State Statutes, and federal and local Laws and Regulations.
- 3.2. Bidder is advised to carefully review those portions of the Bid Form requiring representations and certifications.

4. EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

4.1. Subsurface and Physical Conditions:

- 4.1.1. The Supplementary Conditions identify:
- 4.1.1.1. Those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site.
- 4.1.1.2. Those drawings known to Owner of physical conditions relating to existing surface and subsurface structures at the Site.
- 4.1.2. Copies of reports and drawings referenced will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the “technical data” contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.02 of the General Conditions has been identified and established in Paragraph 4.02 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any “technical data” or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings. Costs associated with making available copies of reports and drawings shall be borne by Bidder.

4.2. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner or others.

4.3. Hazardous Environmental Condition:

- 4.3.1. The Supplementary Conditions identify reports and drawings known to Owner relating to a Hazardous Environmental Condition identified at the Site.
- 4.3.2. Copies of reports and drawings referenced will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the “technical data” contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.06 of the General Conditions has been identified and established in Paragraph 4.06 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any “technical data” or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings. Costs associated with making available copies of reports and drawings shall be borne by Bidder.

4.4. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 4.02 through 4.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a

Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 4.06 of the General Conditions.

4.5. On request, Owner will provide each Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Owner deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.

4.6. Related Work at Site: Reference is made to the General Requirements for identification of the general nature of other work that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) that relates to the Work contemplated by these Bidding Documents. On request Owner will provide to each Bidder for examination, access to Contract Documents (other than portions thereof related to price) for such other work.

4.7. Safety: Paragraph 6.13.C of the General Conditions indicates that if an Owner safety program exists, it will be noted in the Supplementary Conditions.

4.8. It is responsibility of each Bidder before submitting a Bid to:

4.8.1. Examine and carefully study the Bidding Documents, other related data identified in the Bidding Documents, and any Addenda.

4.8.2. Visit the Site to become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

4.8.3. Become familiar with to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

4.8.4. Carefully study all information provided and referenced in plans and specifications.

4.8.5. Consider the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents.

4.8.6. Agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) Bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

4.8.7. Become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

4.8.8. Promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in Bidding Documents and confirm that written resolution thereof by Engineer is acceptable to Bidder.

4.8.9. Determine Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance of the Work.

4.9. Submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this article; that without exception the Bid is premised upon performing and furnishing the Work required by Bidding Documents and applying specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by Bidding Documents; that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder; and that Bidding Documents are generally sufficient to indicate and convey understanding of terms and conditions for performing and furnishing the Work.

5. SPECIAL PRODUCT REQUIREMENTS

5.1. Bidder's attention is directed to the Supplementary Conditions, Paragraph 6.03.

6. PREBID CONFERENCE

A MANDATORY Prebid conference will be held at 10:00 a.m. local time on August 27, 2021. Bidders may attend this mandatory meeting via teleconference by joining the meeting via telephone with the following access information:

Dial-in number: 504-224-8698

Conference ID: 110 795 384#

[Join via Microsoft Teams](#)

6.1. . Representatives of Owner and Engineer will be present to discuss the Project. Bidders are required to attend and participate in the conference. An award will be issued to Bidders that have a representative at the pre-bid conference. Procurement will

transmit to prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

7. SITE AND OTHER AREAS

7.1. Scattered Sites Through Out Orleans Parish as directed by Engineer.

7.2. N/A

8. INTERPRETATIONS AND ADDENDA

8.1. All questions about the meaning or intent of the Bidding Documents are to be submitted to the Sewerage & Water Board Purchasing Department. Deadline to submit questions/clarifications will be August 30, 2021 by 5:00 p.m. to Andrew Kessler, Purchasing Analyst, at akessler@swbno.org. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by the office issuing documents as having received the Bidding Documents. Questions received after the deadline may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

8.2. Addenda may also be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner or Engineer.

8.3. Addenda issued in response to questions will be issued no later than 72 hours prior to bid opening.

9. BID SECURITY

9.1. Bid shall be accompanied by Bid security made payable to Owner in an amount of 5 percent of Bidder's maximum Bid price and in the form of a certified check, bank money order, or a Bid bond (on the attached form), issued by a surety meeting the requirements of Paragraph 5.01 and Paragraph 5.02 of the General Conditions.

9.2. Upon Notice of Award of the Contract, the Bid security of all bidders, other than the lowest two (2) formal bidders will be returned. The return of the Bid security to whom the Contract is awarded is conditioned upon the successful bidder furnishing the insurance required in the specifications and appearance before the Notary for the Sewerage and Water Board of New Orleans within ten (10) consecutive calendar days after notice by the Executive Director or designee of the award of the contract and executing the contract and furnishing bond for the faithful fulfillment thereof according to the attached specifications. The Bid security of the next lowest bidder will be returned as soon as the successful bidder has executed the Contract and furnished bond. If all bid proposals are rejected, all Bid security will be returned immediately.

9.3. Bid security of other Bidders whom Owner believes do not have a reasonable chance of receiving the award will be returned within 7 days after Bid opening.

10. CONTRACT TIMES

10.1. The number of days within which, or the dates by which, Milestones are to be achieved and the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

11. LIQUIDATED DAMAGES

11.1. Provisions for liquidated damages, if any, are set forth in the Agreement.

12. SUBSTITUTE AND "OR-EQUAL" ITEMS

12.1. The Contract, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or "or-equal" items. Whenever it is specified or described in the Bidding Documents that a substitute or "equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement.

13. WAGE RATES

13.1. The Work under these Bidding Documents is to be paid for by public funds; therefore, minimum prevailing wage rates published by the Secretary of the U.S. Department of Labor (see appended rate tables). Refer to Attachment #5 of the Supplementary Conditions for more information.

13.2. The successful bidder is to make available to the Board, complete records in connection with payment of employees during the term of the job in order to permit the Internal Audit Division to check as to adherence to the wage scale presently in effect in accordance with U.S. Government standards.

14. PREPARATION OF BID

14.1. With each electronic copy of the Bidding Documents, Bidder will be furnished one separate Bid Form, and, if applicable,

the Bid Bond Form. Contractor is to print and complete all pertinent documents included as the Original Form of Proposal.

14.2. All blanks on the Bid Form shall be completed by typing or printing with ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each Bid item, unit price item, and alternate listed therein.

14.3. A Bid by a corporation shall be executed in the corporate name by the president or a vice president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown.

14.4. A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown.

14.5. A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.

14.6. A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.

14.7. All names shall be typed or printed in ink below the signatures.

14.8. The Bid shall contain an acknowledgement of receipt of all Addenda; the numbers of which shall be filled in on the Bid Form.

14.9. Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.

14.10. The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number and class, if applicable, shall also be shown on the Bid Form.

15. BASIS OF BID; COMPARISON OF BIDS

15.1. Lump Sum:

15.1.1. Bidders shall submit a Bid on a lump sum basis as set forth in the Bid Form.

15.1.2. Bidders shall submit a Bid on a lump sum basis for the base Bid and include a separate price for each alternate described in the Bidding Documents as provided for in the Bid Form. The price for each alternate will be the amount added to or deleted from the base Bid if Owner selects the alternate. In the comparison of Bids, alternates will be applied in the same order as listed in the Bid Form.

15.2. Unit Price:

15.2.1. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Unit Price Bid Table.

15.2.2. The total of all prices will be the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accordance with Paragraph 11.03 of the General Conditions.

15.2.3. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

15.3. Alternates:

15.3.1. Alternates requiring pricing in the Bid Form are described in Section 01 11 00, Summary of Work, and in the Bid Form.

15.3.2. Indicate in Bid Form the amount to be added or subtracted from the base Bid for alternates described.

15.3.3. Include cost of all related work, including modifying surrounding work to integrate the Work of each alternate.

15.3.4. Alternates listed on Bid Form will be reviewed and accepted or rejected at Owner's option. Accepted alternates will be identified in the Agreement.

16. SUBMISSION OF BID

16.1. The Bid Form, Section 00 41 13 Louisiana Uniform Public Work Bid Form is to be completed and submitted with the Bid Security. The two (2) lowest bidders will have three (3) days following the bid opening to submit the following:

16.1.1. Additional Requirements, Bidder Declaration, Guarantees, and Emergency Procedures.

16.1.2. Affidavit

16.1.3. Voluntary Extensions of the Award of Contract

16.1.4. Affidavit of Non-collusion

16.2. A Bid shall be submitted no later than the date and time prescribed, and at the place indicated in the Invitation to Bid. Enclose Bid in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which

the Bid is submitted), name and address of Bidder, and accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED".

16.3. In accordance with LRS 37:2163, Bidders are required to certify they hold an active Contractor's license and indicate license number on Bid envelope. Bid envelopes received with no Contractor license number will not be opened and will automatically be rejected and considered nonresponsive.

16.4. Bidders are required to submit, in addition to the original Form of Proposal contained herein, three additional copies of the complete proposal including any and all inserts, drawings, brochures, or qualification data of any kind. Failure to submit the copies shall be considered as an informality and should not invalidate the bid, provided that within 24 hours after the bid opening or after the request has been made in writing by the Purchasing Agent for the Sewerage and Water Board of New Orleans, the bidder has furnished same to the Purchasing Department.

17. OPENING OF BIDS

Bids will be opened at the time and place indicated in the Invitation to Bid and unless obviously nonresponsive, read aloud publicly. The amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

18. BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.1. All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

19. EVALUATION OF BIDS AND AWARD OF CONTRACT

19.1. Pursuant to Louisiana Statute 38:2225, a resident Bidder shall be allowed a preference over a nonresident Bidder from a state which gives or requires a preference to Bidders from that state. The preference shall be equal to the preference given or required by the state of the nonresident Bidder.

19.2. Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to not be responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

19.3. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.

19.4. In accordance with R.S. 38:2212(H), the Sewerage and Water Board recommended awards based on bid results will be released via email notification to all respondents either no sooner than fourteen days following the bid opening or after the recommendation of award by the SWBNO or the design professional, whichever occurs first. Bidders may also telephone the Purchasing Department of the Sewerage and Water Board in order to determine the bid results. Objection by a bidder to any recommended award must be made in writing to the Purchasing Agent or Assistant Purchasing within 72 hours (excluding Saturdays, Sundays and Holidays) after that recommended bid award notification.

20. NOTARIAL FEE SCHEDULE

Notarial work for all Sewerage and Water Board of New Orleans construction contracts, requiring to be notarized:
(note that other notarial fees may apply)

<u>Contract Value</u>	<u>Fee</u>
Under \$1,000.00	\$186.00
\$1,000.00 to \$49,999.99	\$347.00
\$50,000.00 to \$499,999.99	\$881.00
\$500,000.00 to \$999,999.99	\$1,888.00
\$1,000,000.00 or over	\$3,778.00

21. CONTRACT SECURITY AND INSURANCE

21.1. Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements

as to bonds and insurance. When Successful Bidder delivers executed Agreement to Owner, it shall be accompanied by such bonds.

22. SIGNING OF AGREEMENT

22.1 The proposal submitted by the staff-recommended bidder will be tentatively selected by the appropriate Sewerage and Water Board Committee meeting. The final award of the contract will be made at the subsequent Board meeting. All prices bid must be held firm for 120 days or until final award of contract by the Board.

22.2 After submittal of required Insurance and Bonds, in form acceptable to the Sewerage and Water Board, the selected Bidder will be authorized by the Executive Director of the Board to appear before the City Notary to sign the contract within ten (10) consecutive calendar days from the date of the notice.

23. SALES AND USE TAXES

23.1 Applicable state and local sales and use taxes for purchase of materials and supplies furnished under this contract shall be paid by the Contractor. Such taxes shall be included in the lump sum bid for the work of this contract. The board shall be relieved of any obligation to pay these taxes.

23.2 ACT 318 OF 1958

23.2.1 Under the terms of Act 318 of 1958, of the Regular Session of the Legislature of the State of Louisiana, all things being equal, preference must be given to either (1) firms doing business in the State of Louisiana or (2) to products produced (or) grown (or) manufactured in the state.

23.2.2 Before any bill for supplies used shall be paid to any non-resident firm, a statement in writing shall be submitted by the seller to the effect that his firm has paid all taxes duly assessed by the State of Louisiana and its political subdivisions, including franchise taxes, to the state and its political subdivisions.

24. RETAINAGE

24.1. Provisions concerning retainage and Contractor's rights to deposit securities in lieu of retainage, if applicable, are set forth in the Agreement Notarial work.

LOUISIANA UNIFORM PUBLIC BID FORM

TO: Sewerage and Water Board of New Orleans
Purchasing Department, Room 133
625 St. Joseph St.
New Orleans, LA 70165

BID FOR: Contract 30238-Restoration of Gravity
Flow Sanitary Sewer Mains and
Replacement from Manhole to Manhole
throughout the City of New Orleans

The undersigned bidder hereby declares and represents that she/he: a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by: _____

_____ and dated: _____
(Owner to provide name of entity preparing bidding documents.)

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following **ADDENDA:** (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging) _____.

TOTAL BASE BID: For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" * but not alternates) the sum of:

Dollars (\$ _____)

ALTERNATES: For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

Alternate No. 1 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

Dollars (\$ _____)

Alternate No. 2 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

Dollars (\$ _____)

Alternate No. 3 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:

Dollars (\$ _____)

NAME OF BIDDER: _____

ADDRESS OF BIDDER: _____

LOUISIANA CONTRACTOR'S LICENSE NUMBER: _____

NAME OF AUTHORIZED SIGNATORY OF BIDDER: _____

TITLE OF AUTHORIZED SIGNATORY OF BIDDER: _____

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER **: _____

DATE: _____

THE FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA UNIFORM PUBLIC WORK BID FORM:

* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

** **A CORPORATE RESOLUTION OR WRITTEN EVIDENCE** of the authority of the person signing the bid for the public work as prescribed by LA R.S. 38:2212(B)(5).

BID SECURITY in the form of a bid bond, certified check or cashier's check as prescribed by LA R.S. 38:2218(A) attached to and made a part of this bid.

LOUISIANA UNIFORM PUBLIC WORK BID FORM

UNIT PRICE FORM

TO: Sewerage and Water Board of New Orleans
Purchasing Department RM 133
625 St Joseph New Orleans, LA 70165

BID FOR: Contract 30238 Restoration of Gravity Flow Sanitary Sewer
Mains and Replacement From Manhole to Manhole
Throughout The City of New Orleans

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Restore 8"-10" Main(Manhole to Manhole) By Excavation And Replacement (0' to 9' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
1	2000	LF		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Restore 8"-10" Main(Point Repair) By Excavation And Replacement (0' to 5' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
2	2	EA		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Restore 8"-10" Main Beyond Point Repair (0' to 5' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
3	2	LF		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Restore 8"-10" Main(Point Repair) By Excavation And Replacement (5'-7' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
4	5	EA		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Restore 8"-10" Main Beyond Point Repair (5'-7' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
5	2	LF		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Restore 8"-10" Main(Point Repair) By Excavation And Replacement (7'-9' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
6	5	EA		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Restore 8"-10" Main Beyond Point Repair (7'-9' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
7	2	LF		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Restore 8"-10" Main(Manhole to Manhole) By Excavation And Replacement (9'-13' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
8	700	LF		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Restore 8"-10" Main(Point Repair) By Excavation And Replacement (9'-11' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
9	4	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 8"-10" Main Beyond Point Repair (9'-11' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
10	5	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 8"-10" Main(Manhole to Manhole) By Excavation And Replacement (13'-17' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
11	30	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 8"-10" Main(Point Repair) By Excavation And Replacement (11'-15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
12	2	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 8"-10" Main Beyond Point Repair (11'-15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
13	2	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 8"-10" Main(Point Repair) By Excavation And Replacement (>15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
14	1	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 8"-10" Main Beyond Point Repair (>15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
15	1	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 12"-15" Main(Manhole to Manhole) By Excavation And Replacement (5'-9' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
16	120	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 12"-15" Main(Point Repair) By Excavation And Replacement (7'-9' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
17	4	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 12"-15" Main Beyond Point Repair (7'-9' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
18	2	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 12"-15" Main(Manhole to Manhole) By Excavation And Replacement (9'-13' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
19	400	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 12"-15" Main(Point Repair) By Excavation And Replacement (9'-11' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
20	1	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 12"-15" Main Beyond Point Repair (9'-11' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
21	1	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 12"-15" Main(Manhole to Manhole) By Excavation And Replacement (13'-17' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
22	30	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 12"-15" Main(Point Repair) By Excavation And Replacement (11'-15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
23	1	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 12"-15" Main Beyond Point Repair (11'-15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
24	2	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 12"-15" Main(Point Repair) By Excavation And Replacement (>15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
25	1	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 12"-15" Main Beyond Point Repair (>15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
26	1	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 18" Main(Point Repair) By Excavation And Replacement (7'-9' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
27	1	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 18" Main Beyond Point Repair (7'-9' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
28	1	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 18" to 21" Main(Manhole to Manhole) By Excavation And Replacement (9'-13' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
29	250	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 18" Main(Point Repair) By Excavation And Replacement (9'-11' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
30	2	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# _____ Restore 18" Main Beyond Point Repair (9'-11' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
31	2	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 18" to 21" Main(Manhole to Manhole) By Excavation And Replacement (13'-17' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
32	280	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# _____ Restore 18" Main(Point Repair) By Excavation And Replacement (11'-15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
33	1	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 18" Main Beyond Point Repair (11'-15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
34	1	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# _____ Restore 18" Main(Point Repair) By Excavation And Replacement (>15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
35	1	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 18" Main Beyond Point Repair (>15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
36	1	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# _____ Restore 21" Main(Point Repair) By Excavation And Replacement (9'-11' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
37	1	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 21" Main Beyond Point Repair (9'-11' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
38	1	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# _____ Restore 21" Main(Point Repair) By Excavation And Replacement (11'-15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
39	1	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Restore 21" Main Beyond Point Repair (11'-15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
40	2	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ___ Restore 21" Main(Point Repair) By Excavation And Replacement (>15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
41	1	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ___ Restore 21" Main Beyond Point Repair (>15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
42	1	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ___ Restore 24" Main(Manhole to Manhole) By Excavation And Replacement (9'-13' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
43	30	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ___ Restore 24" Main(Point Repair) By Excavation And Replacement (9'-11' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
44	1	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ___ Restore 24" Main Beyond Point Repair (9'-11' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
45	1	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ___ Restore 24" Main(Manhole to Manhole) By Excavation And Replacement (13'-17' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
46	25	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ___ Restore 24" Main(Point Repair) By Excavation And Replacement (11'-15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
47	1	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ___ Restore 24" Main Beyond Point Repair (11'-15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
48	1	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ___ Restore 24" Main(Point Repair) By Excavation And Replacement (>15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
49	1	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ___ Restore 24" Main Beyond Point Repair (>15' Depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
50	1	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Furnish and install wye fittings at point repair , (8"-15" Main)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
51	50	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Furnish and install wye fittings at point repair, (18"-24" Main)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
52	2	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# _____ Furnish and install vertical stack fitting, (8"-12"), (Includes wye off main, wye or double wye as shown on SWB Drawing No. 6187-E5)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
53	20	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Furnish and install vertical stack fitting, (15"-24"), (Includes wye off main, wye or double wye as shown on SWB Drawing No. 6187-E5)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
54	25	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Furnish and install 6" Sewer House Connection (from Wye To property line or clean out)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
55	1700	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Furnish and install 6" sewer house connection direct to manhole including tie-in to manhole (from manhole to P/L or CO)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
56	10	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# _____ Remove and replace sewer manholes, complete in place (Brick) (0' to 9' depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
57	50	VF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Remove and replace sewer manholes, complete in place (Brick) (>9 to 15' depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
58	50	VF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Remove and replace sewer manholes, complete in place (Brick) (>15 to 25' depth)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
59	10	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Adjust manhole by raising/lowering casting with bricks and mortar			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
60	40	EA		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# _____ Set Up and Maintain Equipment For Well Pointing Of Trenches (8" to 24" Main)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
61	5	EA		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Set up and Maintaining of sewer bypass system equipment			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
62	5	EA		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Saw cut existing streets, sidewalk and driveway			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
63	3600	LF		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Removal, disposal and restoration of existing roadways, reinforced concrete roadways, (8" thick).			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
64	6100	SY		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Removal, disposal and restoration of existing roadways, Asphalt full depth roadways (5" thick)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
65	2100	SY		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Asphalt overlaid roadways (1.5" thick)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
66	1550	SY		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Cold milling asphalt for street repairs			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
67	20	SY		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Cutting and replacing driveways (6" thick reinforced concrete)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
68	420	SY		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Cutting and replacing driveways (6" thick reinforced concrete with gravel finish)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
69	5	SY		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Cutting and replacing driveways (6" thick reinforced concrete with brick to match existing)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
70	5	SY		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Cutting and replacing sidewalks (4" thick reinforced concrete)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
71	400	SY		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Cutting and replacing sidewalks (4" thick reinforced concrete with gravel finish)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
72	5	SY		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Cutting and replacing sidewalks (reinforced concrete with brick to match existing)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
73	15	SY		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Cutting and replacing concrete curb to match existing			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
74	2200	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Reset granite curbs			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
75	200	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Minimum depth of 3" of batture sand and grass sod as directed			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
76	20	SY		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Service Lateral Clean and Film From Clean Out			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
77	30	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Service Lateral Clean and Film From Main			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
78	10	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ CIPP Line of Service Lateral up to 5 ft			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
79	5	EA		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ CIPP Line of Service Lateral beyond 5 feet			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
80	50	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Full segment CIP lining of 8" pipe			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
81	700	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Full segment CIP lining of 10" pipe			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
82	300	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Full segment CIP lining of 12" pipe			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
83	100	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Full segment CIP lining of 16" pipe			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
84	30	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Full segment CIP lining of 18" pipe			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
85	30	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Full segment CIP lining of 21" pipe			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
86	30	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Full segment CIP lining of 24" pipe			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
87	30	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Full segment CIP lining of 30" pipe			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
88	10	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Full segment CIP lining of 36" pipe			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
89	10	LF		

DESCRIPTION:	X Base Bid or <input type="checkbox"/> Alt.# ____ Full segment CIP lining of 42" pipe			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
90	10	LF		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Service reinstatements			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
91	30	EA		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Mainline internal obstruction removal			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
92	10	EA		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Permit with Traffic plan for work on Notification streets			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
93	2	EA		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Permit with traffic plan for work on state roads			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
94	2	EA		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ traffic controls for work on state roads			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
95	2	EA		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ traffic controls for work on notification streets			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
96	2	EA		

Wording for “DESCRIPTION” is to be provided by the Owner.

All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner

1-2 ADDITIONAL REQUIREMENTS

All blank spaces in this Proposal section shall be filled. A bid price shall be indicated for each bid item. Bids received without all such items completed will be considered non-responsive. The bid shall contain an acknowledgement of receipt of all Addenda in space provided. The Louisiana Uniform Public Work Bid Form & Unit Price Form (if applicable) and the amount of Deposit or Bid Bond five percent (5%) of the total amount of the proposal is REQUIRED to be submitted in a sealed envelope on bid opening date. The two (2) lowest numerical bidders have three (3) days after the bid opening (exclusive of Saturdays, Sundays and Holidays) to submit any additional information such as (Voluntary Extension Sheet, Affidavit, Economically Disadvantage Business Summary Sheet if applicable) as well as requirements of Sections 1-3 through 1-6 below. Failure to do so will render the bid non-responsive.

1-3 BIDDER DECLARATION

I, _____, do hereby declare that the only person interested in this proposal and that no other person than the one herein named have any interest herein or in the contract proposed to be taken; that it is made without any connection with any other person or persons making proposal for the same work and that it is in all respects fair and without collusion or fraud; also that no member of the Sewerage and Water Board or of the City Council of the City of New Orleans or any officer or employee of the City of New Orleans or of the several boards thereof, who are by law excluded from participation herein, and directly or indirectly interested herein or in furnishing bond or in any portion of the profits hereof.

_____ do hereby also declare that _____ have
LOUISIANA CONTRACTOR'S LICENSE in the field of

_____ with NUMBER _____.

And do further declare that I, _____ have carefully examined the annexed specifications and the drawings furnished, and personally inspected the ground and that will contract to provide the necessary tools, machinery and apparatus and other means of construction, and to furnish all labor and material specified in this contract or called for by the plans, necessary to complete the work in the manner specified and within the time mentioned in the specifications and according to the requirements of the Engineer, as herein set forth.

1-4 In accordance with Louisiana Revised Statute 38:2227 the following affidavit shown on the next page must be submitted with the bid, or no later than 3 days after the bid opening (excluding Saturdays, Sundays, and Holidays). Failure to do so will render the bid non-responsive. **Please note, THE AFFIDAVIT MUST BE NOTARIZED.**

1-5 GUARANTEES

I, _____, guarantee that the whole of the work under this contract will be substantially completed within **365** calendar days after the date of the "Commencement of Contract Times."

In case of delay in the completion of the contract beyond the contract time of completion as determined by the Board,

_____ hereby agree to pay, as liquidated damages, the sum of **Two Thousand Dollars (\$2,000.00)** for each calendar day of such delay, which liquidated damages shall become due by the mere elapsing of the delay without the necessity of putting in default.

1-6 EMERGENCY PROCEDURES

Contractor must furnish telephone numbers for routine or emergency telephone calls.

NAME TITLE

TELEPHONE NO.:

NORMAL CALLS _____

EMERGENCY _____

STATE OF LOUISIANA

PARISH OF ORLEANS

AFFIDAVIT

BEFORE ME, the undersigned authority, duly commissioned and qualified and sworn in and for the State and Parish aforesaid, personally came and appeared _____ who after being duly sworn, did depose and say as follows:

- 1) He/she is the _____ (title) of _____ (company);
- 2) He/she has not been convicted of, or has entered a plea of guilty or nolo contendere to any of the crimes, or equivalent federal crimes, listed in Louisiana Revised Statute 38:2227, specifically: public bribery, corrupt influencing, extortion, money laundering, theft, identity theft, theft of a business record, false accounting, issuing worthless checks, bank fraud, forgery, contractors misapplication of payments, malfeasance in office.
- 3) The contracting entity, person or corporation whose principal(s), member(s), and /or Officer(s) have, within the preceding 5 years, not been convicted or plead guilty to, a felony under state or federal statutes, for embezzlement, theft of public funds, bribery, falsification or destruction of public records; (City Code Section 2-8)
- 4) The following is a list of individual partners, incorporators, directors, managers, officers, organizers, or members who have a minimum ten percent interest ownership interest in the bidding entity:

_____ (name)	_____ (name)
_____ (name)	_____ (name)
_____ (name)	_____ (name)

- 5) No other persons hold an ownership interest in the bidding entity via a counter letter.
- 6) None of the above named individual partners, incorporators, directors, managers, officers, organizers, or members, who has a minimum ten percent interest ownership in the bidding entity, been convicted of, or has entered a plea of guilty or nolo contendere to any of the crimes, or equivalent federal crimes, listed in Louisiana Revised Statute 38:2227, specifically: public bribery, corrupt influencing, extortion, money laundering, theft, identity theft, theft of a business record, false accounting, issuing worthless checks, bank fraud, forgery, contractors misapplication of payments, malfeasance in office.
- 7) He/she is not delinquent on any taxes owed the City of New Orleans or fees/charges to the Sewerage and Water Board. (City Code Section 2-8)

The following sections apply only to Public Works Contracts:

- 8) In accord with LA Revised Statute 38:2212.10 the entity represented herein is registered and participates in the "Status verification system" of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324(a), known as the "E-Verify" program to verify that all employees in the State of Louisiana are legal citizens of the United States or are legal aliens.
- 9) The entity represented herein shall continue, during the term of the contract, to utilize a status verification system to verify the legal status of all new employees in the state of Louisiana.
- 10) The entity represented herein shall require all subcontractors to submit to the contractor a sworn affidavit verifying compliance with the Status verification system.

WITNESSES:

AFFIANT

SWORN TO AND SUBSCRIBED BEFORE ME ON THIS

_____ DAY OF _____, 20_____.

NOTARY PUBLIC

Notary Id. No. or Bar Roll No.

PLEASE PRINT NAME OF NOTARY

VOLUNTARY EXTENSIONS OF THE AWARD

If this bid is determined to be the lowest responsive and responsible bid, Bidder agrees to bid extension of the award date by up to two (2) thirty (30) day periods in accordance with the provisions of Louisiana Revised Statue. Title 38, Section 2215 (A).

AGREED:

NAME OF BIDDER (TYPE OR PRINT)

SIGNATURE OF BIDDER

COMPANY NAME

***** END OF SECTION *****

BID BOND

Any singular reference to Bidder, Surety, Owner, or other party shall be considered plural where applicable.

BIDDER (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

BID

Bid Due Date:

Project (Brief Description Including Location):

BOND

Bond Number:

Date (Not later than Bid due date):

Penal sum _____
(Words) (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER

(Seal)

Bidder's Name and Corporate Seal

By: _____

Signature and Title

Attest: _____

Signature and Title

SURETY

(Seal)

Surety's Name and Corporate Seal

By: _____

Signature and Title
(Attach Power of Attorney)

Attest: _____

Signature and Title

Note: Above addresses are to be used for giving required notice.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Surety's liability.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2. All Bids are rejected by Owner, or

3.3. Owner fails to issue a Notice of Award to

4. Payment under this Bond will be due and payable upon default by Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

END OF SECTION

AFFIDAVIT OF NONCOLLUSION

Each Bidder shall complete the following statement

STATE OF _____ }
 _____ } ss
 COUNTY OF _____ }

Affiant is the agent authorized by the Bidder to submit the attached Bid. Affiant further states that the Bidder has not been a party to any collusion among Bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding; or with any State, Parish, or City official or employee as to quantity, quality, or price in the prospective Contract, or any other terms of said prospective contract; or in any discussions between Bidders and any State, Parish, or City official concerning exchange of money or other thing of value for special consideration in the letting of a contract.

Affiant further warrants that no person or selling agency has been employed or retained to solicit or secure such contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by Contractor for purpose of securing business.

Name of Contractor

Bidder (Affiant)

Subscribed and sworn to before me this _____ day of _____, 20_____

My commission expires: _____

____ Notary Public

END OF SECTION

CONTRACT

THIS CONTRACT is by and between the Sewerage and Water Board of New Orleans (“Owner”) and _____, (“Contractor”) in consideration of the mutual covenants set forth herein, agree as follows:

1. WORK.

1.1. Contractor shall complete the Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

1.1.1. _____ **(Project Number/Name)**

2. THE PROJECT.

2.1. The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

2.1.1. . _____ **(Project Number/Name)**

3. ENGINEER.

3.1. The Project has been designed by _____ (Designer) who is to act as the Engineer-of-Record under the oversight and administration of the Owner’s Representative.

4. CONTRACT TIMES.

4.1. Time of the Essence: Time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.2. Days to Achieve Substantial Completion and Final Payment:

4.2.1. The Work shall be substantially completed within [60-90] calendar days from the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions within [60-90] calendar days after the date when the Contract Times commence to run.

4.3. Liquidated Damages: _____.

4.3.1. Should the Contractor fail to commence or start the work within the time allotted or fail to complete individual phases of the work within the times allotted for said individual phases, the Contractor shall pay to the Board the sum of \$2,000 liquidated damages for each calendar day beyond the times specified. If unforeseen circumstances are encountered at the work site, the Contractor may request in writing an extension in days for the completion of work. If granted, the extension of time must be approved in writing by the Engineer and submitted with the invoice.

4.4. Night, Weekend, or Holiday Work:

4.4.1. Night, weekend or holiday work which requires the presence of an engineer or inspector will not be permitted except in cases of emergency or by permission of the Engineer. Except in cases of emergency, all requests for night, weekend or holiday work shall be submitted in writing at least seven calendar days prior to the work being performed. Any approved night, weekend or holiday work requires prior written authorization from the Engineer

5. CONTRACT PRICE.

5.1. Owner shall pay Contractor _____ and No/100 (\$_____) Dollars for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to the prices stated in Contractor's Bid attached hereto as an exhibit.

6. PAYMENT PROCEDURES.

6.1. Submittal and Processing of Payments: Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.2. Progress Payments and Retainage: Owner will make progress payments on account of the Contract Price on the basis of Contractor's Application for Payment on the date of each month as established in the preconstruction conference during performance of the Work as provided herein. All such payments will be measured by the Schedule of Values established as provided in Paragraph 2.07 of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided in the General Requirements.

6.2.1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions:

6.2.1.1. Ninety-five percent of Work completed for contracts in the amount of \$500,000.00 or greater (with the balance being retainage). Ninety percent of Work completed for contracts in an amount less than \$500,000.00 (with the balance being retainage).

6.2.2 In accordance with Louisiana Revised Statute 38:2249, Contractor may withdraw up to the entire retained amount if they deposit an equal amount in a Certificate of Deposit issued by a commercial bank or savings and loan located in Louisiana.

6.2.3. In accordance with Louisiana Revised Statute 38:2248(A), retainage will be released within 45 days of Final Acceptance by the Sewerage and Water Board of New Orleans' Board of Directors.

6.2.4. Upon Substantial Completion, Owner will pay an amount sufficient to increase total payments to Contractor to 100 percent of the Work completed, less such amounts as Engineer will determine in accordance with Paragraph 14.02.B.5 of the General Conditions and less 200 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

6.3. Final Payment:

6.3.1. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, Owner will pay the remainder of the Contract Price as recommended by Engineer as provided in Paragraph 14.07.

7. CONTRACTOR'S REPRESENTATIONS.

7.1. Contractor makes the following representations:

7.1.1. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

7.1.2. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

7.1.3. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

7.1.4. Contractor has carefully studied: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) if any, which have been identified in Paragraph 4.02 of the Supplementary Conditions as containing reliable "technical data", and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site which have been identified in Paragraph 4.06 of the Supplementary Conditions as containing reliable "technical data."

7.1.5. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by

Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor's safety precautions and programs.

7.1.6. Based on the information and observations referred to above, Contractor does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

7.1.7. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

7.1.8. Contractor has given Engineer written notice of conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

7.1.9. The Contract Documents are generally sufficient to indicate and convey understanding of terms and conditions for performance and furnishing of the Work.

8. CONTRACT DOCUMENTS.

8.1. Contents:

8.1.1. The Contract Documents that are attached to this Contract (except as expressly noted otherwise) consist of the following:

8.1.1.1. This Contract

8.1.1.2. Payment and Performance Bond:

8.1.1.3. General Conditions:

8.1.1.4. Supplementary Conditions:

8.1.1.5. Specifications as listed in the table of contents:

8.1.1.6. Drawings consisting of _____ sheets with each sheet bearing the following general title:_____

8.1.1.7. Addenda: _____

8.1.2. Exhibits to this Contract (enumerated as follows): _____

8.1.2.1. Contractor's Bid

8.1.2.2 Contractor's Insurance Certificates

8.1.2.3 Contractor's Corporate Resolution

8.1.3. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:

8.1.3.1. Notice to Proceed

8.1.3.2. Work Change Directives

8.1.3.3. Change Order(s)

8.2. There are no Contract Documents other than those listed above in this Article.

8.3. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

9. MISCELLANEOUS.

9.1. Terms used in this Contract will have the meanings stated in the General Conditions and the Supplementary Conditions.

9.2. Successors and Assigns: Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

9.3. Severability: Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

9.4. Assignment of Contract:

9.4.1. No assignment by a party hereto of any rights under or interests in the Contract shall be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment shall release or discharge the assignor from any duty or responsibility under the Contract Documents.

9.5. Contractor's Certifications:

9.5.1. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this paragraph:

9.5.1.1. “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in Contract execution;

9.5.1.2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract Price at artificial noncompetitive levels, or (c) to deprive Owner of the benefits of free and open competition;

9.5.1.3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, noncompetitive levels; and

9.5.1.4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10. Force Majeure:

Neither party shall be liable for any failure to make or accept one or more deliveries arising out of any embargo, war, fire, flood, earthquake, epidemic or other calamity, act of God or of the public enemy, governmental act (including, but not restricted to, any government priority, preference, requisition, allocation, interference, restraint or seizure, or the necessity of complying with any governmental order, directive, ruling or request) or by any strike or labor dispute involving the owner, or any manufacturer, supplier or carrier of the machinery, materials or supplies required hereunder, or any other similar circumstance beyond the control of the party.

11. Jurisdiction & Venue:

Moreover, Contractor, by act of signing this Contract, consents and yields to the jurisdiction of the Civil District Court of the Parish of Orleans of the State of Louisiana and does formally waive any plea of lack of jurisdiction, on account of their residence elsewhere in the event of suit under this Contract. This Contract shall be governed by and shall be interpreted in accordance with the laws of the State of Louisiana. Contractor agrees that any suit arising out of this Contract shall be brought in the Civil District Court for the Parish of Orleans and Contractor hereby waives any objection to improper venue and agrees to submit to the jurisdiction of said court.

IN WITNESS WHEREOF, Owner and Contractor have signed this Contract in triplicate. One counterpart each has been delivered to Owner, Contractor, and Engineer. All portions of the Contract Documents have been signed or identified by Owner and Contractor or on their behalf.

This Contract will be effective on _____, 2021 (which is the Effective Date of the Contract).

SEWERAGE AND WATER BOARD OF NEW ORLEANS

BY: _____
GHASSAN KORBAN, EXECUTIVE DIRECTOR

WITNESSES:

Print: _____

Print: _____

NOTARY PUBLIC

**The foregoing contract is approved as to form.
New Orleans, Louisiana**

_____ day of _____, 2021.

**YOLANDA GRINSTEAD, SPECIAL COUNSEL
SEWERAGE AND WATER BOARD OF NEW ORLEANS**

IN WITNESS WHEREOF, Owner and Contractor have signed this Contract in triplicate. One counterpart each has been delivered to Owner, Contractor, and Engineer. All portions of the Contract Documents have been signed or identified by Owner and Contractor or on their behalf.

This Contract will be effective on _____, 2021 (which is the Effective Date of the Contract).

(COMPANY'S NAME)
LOUISIANA LICENSE NO. _____

BY: _____
TITLE: _____

WITNESSES:

Print: _____

Print: _____

**RECORDED IN THE PARISH OF ORLEANS
STATE OF LOUISIANA
ON _____
N.A. # _____
INSTR.# _____**

[END OF SECTION]

PAYMENT AND PERFORMANCE BOND

Bond No.:

KNOW ALL PERSONS BY THESE PRESENTS, That we, _____, as principal, (hereinafter called the "Principal"), and _____, as surety, (hereinafter called the "Surety"), are held and firmly bound unto _____, as Obligee, in the sum of _____ Dollars (\$ _____) for the payment whereof said Principal and Surety bind themselves, jointly and severally, as provided herein.

WHEREAS, the Principal has entered into a Contract with Obligee dated _____, to perform construction work for _____ ("Contract").

NOW, THEREFORE, the condition of this obligation is such that if Principal shall promptly and faithfully perform the Construction Work to be performed under the Contract, and shall promptly make payment to Claimants, as hereinafter defined, for all labor and material actually used, consumed or incorporated in the performance of the Construction Work under the Contract, then this obligation shall be null and void; otherwise to remain in full force and effect.

Surety's obligations hereunder to Obligee shall not arise unless Principal is in default under the Contract for failing to perform the Construction Work and has been declared by Obligee to be in default under the Contract for failing to perform the Construction Work; and Obligee has performed its obligations under the Contract. In such event, Surety shall have a reasonable period of time to:

1. Upon entering into an acceptable written takeover agreement with Obligee, undertake to perform and complete the Construction Work to be done under the Contract; or
2. Obtain bids or negotiated proposals from qualified contractors for a contract for completion of the Construction Work to be done under the Contract, arrange for a contract to be prepared for execution by Obligee and contractor, to be secured with performance and payment bonds executed by a qualified surety; or
3. Waive its right to perform or complete the Construction Work pursuant to paragraphs 1 and 2 above, and with reasonable promptness under the circumstances: (a) After investigation, determine the amount for which it may be liable to the Obligee and, as soon as practicable after the amount is determined, tender payment therefor to the Obligee; or (b) Deny liability in whole or in part and notify the Obligee citing reasons therefor.
4. The Contract balance, as defined below, shall be credited against the reasonable construction cost of completing the Construction Work to be performed under the Contract. If completed by Obligee pursuant to paragraphs 2 or 3 above, and the reasonable construction cost of completing the Construction Work exceeds the Contract balance, Surety shall pay to Obligee such excess, but in no event shall the aggregate liability of Surety exceed the amount of this bond. If Surety completes the work pursuant to paragraph 1 above, that portion of the Contract balance as may be required to complete the Construction Work to be done under the Contract and to reimburse Surety for its outlays shall be paid to Surety at the times and in the manner as said sums would have been payable to Principal had there been no default under the Contract. To the extent that Surety's outlays exceed the Contract

balance paid to Surety by Obligee, Surety shall be entitled to a dollar for dollar reduction of its liability under this bond, and Surety's aggregate liability shall not exceed the penal sum of this bond. The term "Contract balance" as used herein shall mean the total amount payable by Obligee under the Contract and any amendments thereto, less the amounts properly paid by Obligee to Principal under the Contract. The term "Construction Work" as used herein shall mean the providing of all labor and/or material necessary to complete Principal's scope of work under the Contract. Notwithstanding any language in the Contract to the contrary, the Contract balance shall not be reduced or set off on account of any obligation, contractual or otherwise, except the reasonable construction cost incurred in completing the Construction Work.

5. Any suit by Obligee under this bond must be instituted before the earlier of: (a) the expiration of one year from the date of substantial completion of the Construction Work, or (b) one year after Principal ceased performing the Construction Work, excluding warranty work. If the public works bond statutes in the location where the Construction Work is being performed contains a statute of limitations for suits on the performance bond, then the limitation period set forth herein shall be read out of this bond and the statute of limitation set forth in the public works bond statutes shall be read into this bond. If the limitation set forth in this bond is void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable, and said period of limitation shall be deemed to have accrued and shall commence to run no later than (y) the date of substantial completion of the Construction Work, or (z) the date Principal ceased performing Construction Work, excluding warranty work, whichever occurs first.

6. A Claimant is defined as one other than Obligee having a contract with Principal or with a direct subcontractor of Principal to supply labor and/or materials and said labor and/or material is actually used, consumed or incorporated in the performance of the Construction Work under the Contract.

7. Principal and Surety hereby jointly and severally agree with Obligee that every Claimant as herein defined who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such Claimant's work or labor was done or performed or materials were furnished by such Claimant, may bring suit on this bond, prosecute the suit to final judgment for the amount due under Claimant's contract for the labor and/or material supplied by Claimant which was actually used, consumed or incorporated in the performance of the Construction Work, and have execution thereon; provided, however, that a Claimant having a direct contractual relationship with a subcontractor of Principal shall have a right of action on this bond only if said Claimant notifies Surety in writing of its claim within ninety (90) days from the date on which said Claimant did or supplied the last labor and/or materials for which the claim is made. Obligee shall not be liable for the payment of any costs or expenses of any such suit.

8. No suit or action shall be commenced hereunder by any Claimant after the expiration of the earlier of: (a) one year after the day on which Claimant last supplied the labor and/or materials for which the claim is made; or (b) the limitation period set forth in the public works bond statutes, if any, in the location where the construction work is being performed. Any limitation contained in this bond which is prohibited by any law controlling in the state where the suit is filed shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by the law of that state, and said period of limitation shall be deemed to have accrued and shall commence to run on the day Claimant last supplied the labor and/or materials for which the claim is made.

9. No suit or action shall be commenced hereunder by Obligee or any Claimant other than in a state court of competent jurisdiction in the county or other political subdivision of the state in which the project,

or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.

10. The amount of this bond shall be reduced by and to the extent of any payment or payments made by Surety in good faith hereunder whether made directly to Obligee or Claimant(s) or otherwise in discharge of Principal's obligations. Surety's liability hereunder to Obligee and all Claimants is limited, singly, or in the aggregate, to the penal sum of the bond set forth herein. Surety may, at its option, discharge all obligations under this bond by interpleading into the registry of any court of competent jurisdiction of the full unused penal sum of this bond, or such portion thereof that will satisfy the obligations owed to Obligee and/or Claimant(s). No right of action shall accrue on this bond to any person or entity other than Obligee and/or Claimant(s). The bond shall not afford coverage for any liability of Principal for tortious acts, whether or not said liability is direct or is imposed by the Contract and shall not serve as or be a substitute for or supplemental to any liability or other insurance required by the Contract.

11. This bond is provided to comply with all statutory (including but not limited to La. R.S. 38:2216 and La. R.S. 38:2219) or other legal requirement for performing construction contracts for public owners in the location where the construction work is being performed. Except as provided in paragraphs 5 and 8 above, all provisions in the bond which are in addition to or differ from those statutory or legal requirements shall be read out of this bond, and all pertinent statutes and other legal requirements shall be read into the bond. This bond is a statutory bond, not a common law bond.

Signed this _____ day of _____, 20____.

(Principal)

By: _____

(Surety)

By: _____, Attorney-in-Fact

ECONOMICALLY DISADVANTAGED BUSINESS PARTICIPATION SUMMARY SHEET

Minimum Percentage Goal Participation for this Contract is 36%

Contract 30238 - RESTORATION OF GRAVITY FLOW SANITARY SEWERS BY EXCAVATION AND REPLACEMENT FROM MANHOLE TO MANHOLE, CIPP LINING OF SERVICE LATERALS AND POINT REPAIRS AT VARIOUS SITES THROUGHOUT THE CITY OF NEW ORLEANS

Name and Address of Disadvantaged Business Enterprise Company	Name of Contact Person	Scope of Work to be Performed	Dollar Amount of work to be performed	Percentage of Dollar Amount to Total Bid Price

THIS FORM MUST BE COMPLETED AND SUBMITTED BY THE TWO LOWEST NUMERICAL BIDDERS, ALONG WITH CORRESPONDENCE FROM SLDBE(S) ON THEIR OWN LETTERHEAD REAFFIRMING NEGOTIATED TERMS, NO LATER THAN 3 DAYS AFTER THE BID OPENING (EXCLUSIVE OF SATURDAYS, SUNDAYS AND HOLIDAYS). FAILURE TO DO SO WILL RENDER THE BID NON-RESPONSIVE. BY SUBMITTAL OF THIS FORM, PRIME CONTRACTOR ACKNOWLEDGES THAT DBE(S) HAVE BEEN CONTACTED AND A FIRM PRICE HAS BEEN OBTAINED.

NOTE: Signature required even if judged **NOT APPLICABLE** by the **BIDDER**

Prime Name: _____

Print Name

Prime Company's Name: _____

Prime Address: _____

Prime Signature: _____

Signature

Date: _____

E-mail: _____

Telephone Number: _____

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

In accordance with the adoption of Resolution R231-97, the Sewerage and Water Board of New Orleans has established a race and gender-neutral Disadvantaged Business Enterprise (DBE) Plan. The prime contractor shall be required to make a demonstrated good faith effort to award (36)% of the amount of the contract to certified disadvantaged business enterprises as **subcontractors or suppliers performing commercial useful functions which are consistent with the work required on this contract**. The percent participation having been determined for this specific contract by recommendation of the **Construction Review Committee (CRC)**, which is a joint effort of representatives from the City of New Orleans, Sewerage and Water Board, and representatives of local contractor organizations. This percentage requirement shall be considered an informality which is subject to modifications and may be waived or adjusted by the Sewerage and Water Board of New Orleans if the prime contractor, after having demonstrated a good faith effort, is unable to comply with the requirement.

DEMONSTRATED GOOD FAITH EFFORTS

Before receiving an award of the contract, the contractor must meet the DBE goals or prove that he/she has made a demonstrated good faith efforts. To determine whether a particular contract bidder has made demonstrated good faith efforts to reach the DBE participation goal, the Board and its staff will consider the following:

- a. whether the contractor attended all pre-bid meetings that may have been scheduled by the Board to inform DBE firms of subcontracting opportunities and/or requested the Board Directory of Certified DBE firms;
- b. whether the contractor advertised in general circulation and trade association publications, concerning the DBE subcontracting opportunities, and allowed the subcontractors reasonable time to respond;
- c. whether the contractor provided written notice to a reasonable number of individually named DBE firms and allowed sufficient time for the DBE firms to participate effectively;
- d. whether the contractor followed up initial solicitations of interest by contacting DBEs to determine with certainty whether the DBEs were interested in bidding;
- e. whether the contractor selected specific portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goals (including breaking down contracts into smaller units to facilitate DBE participation);
- f. whether the contractor provided interested DBEs with adequate information about the plans, specifications and requirements of the contract;
- g. whether the contractor negotiated in "good faith" with interested DBEs and did not reject DBEs as unqualified without sound reasons based on a thorough investigation of their capabilities;
- h. if the contractor did reject a DBE as unqualified, the contractor must state his or her reason for doing so in writing;

- i. whether the contractor has used the services of available community organizations and small and/or disadvantaged business groups; local, state and federal small or disadvantage business assistance offices; and other organizations that provide assistance in the recruitment and placement of DBE firms;
- j. whether the contractor has made sufficient efforts to negotiate with DBEs for specific sub-bids, including at a minimum:
 - (1) names, addresses, telephone numbers of DBEs that the contractor contacted,
 - (2) a description of information provided to those DBE firms, and
 - (3) a statement of why additional agreements with DBEs were not reached to include but not limited to proof the DBEs' price exceeded that of non-DBEs.

1. **Policy:**

It is the policy of the Board that DBE firms, as defined in the Board's Disadvantaged Business Enterprise Plan, shall have the maximum allowable opportunity to compete for the award of the participation in the performance of the Board's publicly bid contracts. Consequently, the CRC and the Board have set the DBE participation goal applicable to this construction contract.

2. **DBE Obligation:**

The Board and its contractors agree to ensure that DBE's, as defined in the Board's Disadvantaged Business Enterprises Plan, shall have the maximum allowable opportunity to compete for the award of the participation in the performance of contracts and subcontracts provided under this agreement. In this regard, contractors shall take all necessary and reasonable steps in accordance with this DBE Plan to ensure that DBE's have the maximum allowable opportunity to compete for such contracts. The Board and its contractors shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of the Board's publicly bid contracts.

3. **Utilization of DBE Vendor Listings:**

All bidders are required to utilize the most recent Sewerage and Water Board State-Local Disadvantaged Business Enterprise Program Approved Vendor Listings for **Construction, Goods & Services/Professional Services**, in their selection of DBE entities to meet DBE participation goals. **Bidders are required to utilize DBE's as subcontractors or suppliers only in the areas for which they are certified. A description of the areas of work that DBE's can provide is contained in these vendor listings.** In addition, an alphabetical list of vendors/contractors is provided indicating the name of the company, address, name of owner, telephone number, fax number, the date the company became certified, and a description of the work that these entities are certified to perform. **Companies that are already certified as a DBE cannot fulfill the DBE requirements by listing themselves as the subcontractor to meet the DBE goal. The prime contractor shall select another DBE from the Sewerage and Water Board's Approved Vendor Listing.**

4. **Contacting DBE's and Obtaining a Firm Price**

All prime contractors are required to contact DBE's and obtain a firm price before listing the DBE's on the Participation Summary Sheet. As confirmation of established contact, bidder will include with their Participation Summary Sheet submission a signed correspondence from the SLDBE subcontractor on their own letterhead that reaffirms negotiated terms such as scope of work and monetary compensation.

5. Failure to Comply with DBE Bid Specifications:

All bidders for this Board contract are hereby notified that failure to comply with the above DBE specifications may constitute the bid as being non-responsive, and sufficient cause for rejection.

6. Failure to Carry Out DBE Policy:

All bidders, potential contractors, or subcontractors for this Board contract are hereby notified that failure to comply with the DBE policy and DBE obligations, set forth above, shall constitute a breach of contract which may result in termination of the contract or such other remedy as deemed appropriate by the Board, to include excluding bidder from bidding on future Board contracts.

7. Setting Minimum Participation Goals:

The stated minimum percentage DBE participation goal recommended by CRC and approved by the Board applies to the work of this contract. The two lowest numerical bidders must complete and submit a DBE Participation Summary Sheet no later than three (3) days after the bid opening (excluding Saturdays, Sundays and holidays). The DBE Participation Summary Sheet should be completed properly, showing that at least the percentage goal of the total contract bid price will be subcontracted or otherwise awarded through procurement action to DBE's. Should the bidder fail to comply with this request, the bid shall be considered unresponsive, unless:

- a.** An affidavit is furnished by the bidder with its bid showing that the DBE goals cannot be met for the following reasons:
 - (1) No DBE firms made offers. Here, it must be shown, documented and demonstrated that good faith efforts (as defined in Part III, D, 2. of the Board's DBE plan) were made by the bidder to obtain the participation of DBE firms and that they did not respond, or
 - (2) The DBE offers made and accepted for subcontract and/or material supplies do not total the stated goal for participation, but total a lesser percentage, and
 - (3) The bidder was unable to obtain DBE further participation, despite his or her demonstrated good faith efforts (as defined in Part III, D, 2 of the Board's DBE Plan) to obtain additional participation by DBE firms.

- b. Each of the assertions made by the bidder must be supported by documentary evidence.

8. Other Clauses Unaffected:

Nothing contained herein shall invalidate, change, annul, release, restrict, or affect the liability on the bonds or insurance given by the contractor, or the time required for completion of the contract.

9. Determination of Efforts to Meet Goals:

Initial determination of bidder efforts to meet the DBE participation goal shall be based on the DBE participation representations submitted by the two lowest numerical bidders no later than three (3) days after the bid opening (excluding Saturdays, Sundays and holidays). Bidders shall submit all the forms required herein no later than three (3) days after the bid opening (excluding Saturdays, Sundays and holidays), and the DBE Office will examine the contents thereof. The Board's DBE Officer may, if deemed advisable, request further information, explanation or justification from any bidder.

10. Contract Monitoring:

- a. The Board's DBE Office will monitor contractor during the operation of the contract to insure that the contractor meets all of its DBE obligations as specified in the contract bid. The Board's DBE office shall establish rules and regulations, to be approved by the Board, for the ongoing monitoring of contractor compliance.
- b. Disadvantaged Business Enterprise Program Office personnel or their designated representative shall be allowed to conduct periodic monitoring of contractors' compliance with the agreed to Disadvantaged Business Enterprise Program participation requirements. Contractors shall be required to complete and return to the Disadvantaged Business Enterprise Program Office in the time required all requests for information and data relative to the contractors' activities in meeting the required Disadvantaged Business Enterprise participation goal. Additionally, Disadvantaged Business Enterprise Office personnel or their designated representative shall have access to contractor and subcontractor(s) records pertaining to, but not specifically limited to labor, costs and materials supplied and used on the Board contract, as well as inspection and photocopying of any and all contracts, agreements and correspondence relative to the Disadvantaged Business Enterprise contract participation requirements. Such inspection will be performed during normal business hours, and will be conducted in such a fashion so as to minimize interference with production of the contract. Visits may be made to job sites, as well as to administrative offices of the contractor and subcontractor(s) participants. Such inspection and on-site visits may be scheduled with or without prior notice to the contractor or Disadvantaged Business Enterprise subcontractor participant. Contractors' failure to comply with these monitoring requirements may result in termination of the contract or such other remedy as deemed appropriate by Board.

11. Maintaining Records:

Subsequent to the completion of a contract, contractors are required to maintain for three (3) years such records as are necessary to determine compliance with their DBE obligations. During construction, or performance of the DBE obligations, contractors shall submit reports as requested to enable the DBE Office to monitor this compliance.

12. Umbrella Bonding:

On contracts where subcontracting exists and where practicable (i.e., when a substantial risk or financial hardship would not be incurred by the prime contractor), the contractor may use an umbrella bond to encompass the DBE firm.

13. Board Action to Seek Compliance:

The contractor consents to such appropriate actions taken to ensure that prime contractors and subcontractors comply with the DBE provisions, to include but not limited to:

- a. desk audits to review all material, and information concerning the contractor's compliance;
- b. on-site reviews that may include interviews, visits to project locations, and inspection of documents and/or information not available at the desk audit that pertains to the contractor's compliance;
- c. any additional investigation that may be called for by a lack of proper record keeping, failure of the prime contractor to cooperate; failure of DBEs to cooperate; visible evidence unsatisfactory performance; other evidence as may warrant further investigation.

14. Non-Compliance Finding:

The Board staff will make compliance determinations regarding its prime contractors. Documentation of noncompliance will include the specific areas in which the contractors failed to comply. In these instances, appropriate legal action consistent with the DBE and other contract provisions will be taken.

15. Contractor's Duties

a. Record Keeping

Successful bidders shall establish and maintain records and submit regular reports to the DBE office as required, which will identify and assess progress in achieving DBE subcontract goals and other DBE participation efforts.

b. Failure To Comply With EDBP Participation Requirements

Failure to comply with any of the EDBP requirements of this contract shall constitute a violation of the terms and conditions of this contract and a cause for the termination of the contract at the option of the Board.

Such violations shall include, but not limited to:

Failing to meet the percentage participation requirements as set out in the contract documents.

Failing to use certified EDBP contractors/vendors in performing the scope of work as identified in the contract documents (EDBP participation summary sheet).

Failing to comply with the “monitoring of EDBP requirements” included herein as part of the contract, such as contractors:

Failure to submit quarterly report and any other necessary reports timely and adequately as required by the EDBP Office.

Failure to grant access to contractor/subcontractor records by EDBP Office personnel, and

Failure to allow on-site investigations and visits, etc.

Failing to report the removal or termination of a certified EDBP vendor /subcontractor.

Failing to secure authorization for replacement of certified EDBP subcontractors from the Director of the Economically Disadvantaged Business Program.

In Lieu of termination the Board, through the EDBP Office, may impose the following penalties:

Withhold from the contractor in violation up to 10% of all future payments due to the contractor, until such time as the violations have been corrected.

Withhold from the contractor in violation, all future payments until such time as the violations have been corrected.

c. Subcontract Clause

All bidders and potential contractors must assure the Board that they will include the above clauses in all agreements, which offer further subcontracting opportunities.

d. Contract Award

Bidders are hereby advised that meeting DBE subcontract goals or making a demonstrated good faith effort to meet such goals are conditions of being awarded and maintaining construction, procurement, or professional services contracts by the Board.

e. Restrictions on DBE Subcontracting

No **DBE** subcontractor or vendor selected to perform work as a **DBE** on a Sewerage and Water Board contract will be allowed to subcontract any portion of its work to a Non-Board certified **DBE**, unless the work to be performed is necessary for the execution of the contract and there are no Board certified **DBE**'s available to perform such work.

This process will require that each **DBE** participant performing work on a Sewerage and Water Board funded contract submit a request to subcontract out any portion of work deemed necessary for execution of the contract to the Board's **EDBP** office. On a form provided by the **EDBP** office, the **DBE** contractor or vendor will indicate the dollar amount of work to be subcontracted, the specific scope or nature of the work, the percentage of the total amount of work to be performed by the **DBE** subcontractor and vendor, and the entity to whom the work will be subcontracted.

Both prime and **DBE** subcontractors are advised that the failure to comply with these requirements may result in the loss of **DBE** certification and non-compliance by the prime contractor in meeting **DBE** contractual obligations.

f. Changes In DBE Participation

The Prime Contractor will not be allowed to make changes in DBE participation without submittal of a written request explaining reason, a revised Participation Summary Sheet and approval by the Director of the Economically Disadvantaged Business Program. Failure to comply with these requirements may result in non-compliance by the Prime Contractor in meeting DBE contractual obligations.

TECHNICAL SPECIFICATIONS

FOR CONTRACT 30238

**RESTORATION OF GRAVITY FLOW SANITARY SEWERS BY EXCAVATION AND
REPLACEMENT FROM MANHOLE TO MANHOLE, CIPP LINING OF SERVICE LATERALS AND
POINT REPAIRS AT VARIOUS SITES THROUGHOUT THE CITY OF NEW ORLEANS**

TABLE OF CONTENTS

SECTION 01 – CONTRACT DOCUMENTS AND EXTENT OF CONTRACT-----	112
SECTION 02 – SUPPLEMENTARY SPECIAL CONTRACT PROVISIONS-----	119
SECTION 03 – TRAFFIC CONTROLS AND REGULATION-----	148
SECTION 04 – MATERIALS-----	152
SECTION 05 – ORDERING OF WORK-----	155
SECTION 06 – RESTORATION OF SEWER MAINS BY POINT REPAIR-----	158
SECTION 07 – REPLACEMENT OF SEWER MAINS FROM MANHOLE TO MANHOLE-----	164
SECTION 08 – SEWER FLOW CONTROL-----	171
SECTION 09 – CURED-IN-PLACE LINER (CIPP)-----	173
SECTION 10 – SERVICE CONNECTION SEAL + LATERAL FULL WRAP STYLE OR BRIM STYLE CONNECTION SEAL-----	186
SECTION 11 – TRENCHING, BACKFILLING, AND COMPACTION-----	193
SECTION 12- SURFACE RESTORATION-----	198
SECTION 13- GEOSPATIAL INFORMATION SERVICES (GIS)-----	201

SECTION 1

CONTRACT DOCUMENTS AND EXTENT OF CONTRACT

PART 1.0 GENERAL

1.01 CONTRACT DOCUMENTS

The Contract Documents governing this **Contract 30238**, consist of the following papers, which are bound together under the one cover, namely:

- * Advertisement and Description of **Contract 30238**;
- * Contract and Bond;
- * **Section A of the General Specifications**, including Information for Bidders and General Provisions;
- * **Section B of the General Specifications**, covering general matters pertaining to construction;
- * **Section C of the General Specifications**, covering materials;

The Special Specifications for **Contract 30238** including the Form of Proposal and the standard Drawings listed in **SECTION 1 PART 1.02** are not bound with the other contract documents.

The Sewerage and Water Board has discontinued the policy of issuing the "applicable sections" of the General Specifications with each contract specification. In implementing this system, each prospective bidder is given a complete set of the "General Specifications", without charge, with the first set of contractual drawings and bid data he receives. If he has previously received his complimentary set, he will not be entitled to additional sets without cost. This set of specifications is for his use on this Contract, and future Board Contracts. Additional copies are available to all at the office of the Purchasing Agent at a cost of \$5.00 per copy. Holders of the "General Specifications" will be kept informed of any changes that may occur.

** The City of New Orleans Department of Public Work General Specifications.

** The Department of Public Works General Specifications may be obtained from the City of New Orleans Department of Public Works, 1300 Perdido Street, Room 6W02.

1.02 CONTRACT DRAWINGS

The Sewerage and Water Board Standard Drawings governing the work which will be performed under this **Contract 30238** include the following:

3143-E-1 *Details of sewer and water manhole castings.*

4697-E5-A *Typical standard and non-standard sheeting and open trench sections for sewer pipe installation*

6178-B-6 *Typical sewer brick manhole and drop manhole*

6312-E5-A *Typical sewer service connection for sewer main less than or equal to 8' deep.*

6312-E5-B *Typical sewer service connection for sewer main greater than or equal to 8' deep.*

7007-SWD *Roadway restoration over pipe trenches.*

7260-SWD *Specifications for installation of sewer, water and drain mains.*

8178-SD *Typical sewer and drain siphon & pipe/wall connectors*

The City of New Orleans Department of Public Works Standard Drawings (Latest Revision) governing the work which will be performed under this **Contract 30238** include **Standard Drawings 1 through 12**.

1.03 SCOPE AND EXTENT OF CONTRACT

- A. The work to be performed under this contract consists of furnishing and delivering all labor, materials, supervision, construction equipment, mechanical and electrical equipment not furnished by the Board, travel utilities, transportation, supplies, tools and services necessary for performing all work as specified in the Contract Documents, plus whatever work may be added as extra work under the provisions stated **in Paragraphs No. 21 and No. 22 of Section A of the General Specifications**.

The intent of the work is sewer service connection replacement and repairs, point repairs, interim and final restoration, sewer flow control, traffic maintenance and control, labor, equipment, tools and materials as necessary to perform the work as specified in the Contract Documents.

- B. This contract shall also include the excavation, demolition, backfilling, replacement, and repair to condition existing prior to disturbance by the Contractor, of all bridges, ditches, drains, culverts, curbs, fences, sidewalks, pavements or other structures or obstacles the removal of which is necessary for the execution of this contract.
- C. Provide all items, articles, materials, equipment, etc., mentioned herein or scheduled or shown on the drawings, and all labor, workmanship, tools, appliances, etc., required for the proper installation thereof, to accomplish the work as it pertains to this contract. In general, this Contract shall provide any item of labor or material which is necessary for a completed system to accomplish the the work as it pertains to this contract, whether specifically mentioned or not.
- D. This contract includes, but is not limited to the following items of work:
- i. Removal and disposal of roadways, driveways, sidewalks or unpaved surface areas.
 - ii. Removal and disposal of existing gravity flow sanitary sewers and related material;

- iii. Repair of gravity flow sanitary sewers by point repair;
- iv. Removal and disposal of existing sewer house connections from main to property line;
- v. Replacement and tie in of sewer house connections from main to property line;
- vi. Placement of backfill including compacted subbase and base material to grade;
- vii. Restoration of roadways, driveways, sidewalks or unpaved surface areas

1.04 LOCATION OF CONTRACT WORK

The location of the work site will be at scattered locations throughout Orleans Parish. It is mandatory that all prospective bidders acquaint themselves with the local conditions.

1.05 OTHER CONTRACTORS

Other Contractors and Sewerage and Water Board personnel may be working in the vicinity of any job site during the execution of this contract. The Contractor shall cooperate with other Contractors and/or Sewerage and Water Board workmen in the area and shall organize his work so as not to interfere with or delay in any way, the work of the other Contractors and/or Sewerage and Water Board workmen. The Engineer reserves the right (should it be the best interest of the Board) to arbitrate questions of conflict between Contractors and/or between Contractors and Sewerage and Water Board workmen and his decision shall be final.

1.06 CITY AND STATE SALES TAXES

Applicable state and local sales and use taxes for purchase of materials and supplies furnished under this contract shall be paid by the Contractor. Such taxes shall be included in the Total Base Bid for the work of this contract. The board shall be relieved of any obligation to pay these taxes.

1.07 PROPOSAL FORM

All blank spaces in the Form of Proposal shall be completed. A bid price shall be indicated for each Bid item. Bids received without all such items completed will be considered non-responsive. The bid shall contain an acknowledgment of receipt on Bidders' letterhead of all Addenda; which shall be bound to the Bidder's Contract Specifications to form a complete document.

1.08 BID PRICE

- A. The Total Base Bid amount shall include and cover the performance of all labor and the furnishing of all materials requisite and proper for the work named herein and in the manner set forth, including mobilization, all as described in the Contract Documents.
- B. There are no Alternate bids associated with this contract.

1.09 Louisiana Revised Statute 9:2716

Any contract between the Sewerage and Water Board of New Orleans and a person or entity entered into as a result of fraud, bribery, corruption, or other criminal acts, for which a final conviction has been obtained, shall be absolutely null and shall be void and unenforceable as contrary to public policy. Any person whose conviction causes the nullity of the contract as provided shall be responsible for payment of all costs, attorneys' fees, and damages incurred in the re-bidding of the contract.

1.10 BID EVALUATION

- A. All bids received will be evaluated on the basis of the Total Base Bid in the Form of Proposal.
- B. The Total Base Price shall be the arithmetic sum of any and all unit prices designated "Base Bid".
- C. Bidders shall provide prices, where required in the form of proposal, for all work. Any bids received without prices submitted for all required items will be rejected and will not be considered.
- D. If two or more proposals are received equal in amount and lower than any other proposal, the Sewerage and Water Board reserves the right to evaluate these proposals and to decide which proposal will be accepted. Preference will be given to home contractors, all conditions being equal.

1.11 ACT 318 OF 1958

- A. Under the terms of Act 318 of 1958, of the Regular Session of the Legislature of the State of Louisiana, all things being equal, preference must be given to either (1) firms doing business in the State of Louisiana or (2) to products produced (or) grown (or) manufactured in the state.
- B. Before any bill for supplies used shall be paid to any non-resident firm, a statement in writing shall be submitted by the seller to the effect that his firm has paid all taxes duly assessed by the State of Louisiana and its political subdivisions, including franchise taxes, to the state and its political subdivisions.

1.12 BID DISPUTES

Staff recommended awards based on bid results will be posted on a bulletin board located outside the office of the Sewerage and Water Board Purchasing Department within 72 hours (excluding Saturdays, Sundays, and Holidays) after the Bid opening. Bidders may also telephone the Purchasing Department to determine the bid results. Objection by a bidder to any recommended award must be made in writing to the Purchasing Agent or Assistant Purchasing Agent within 72 hours (excluding Saturdays, Sundays, and Holidays) after the recommended bid award has been posted.

1.13 BID CONFLICTS

- A. Prices bid in the proposal must be written in full in words also in figures. If there is a difference between the words and the figures in any price bid, the price written in words shall be considered to be the true bid.
- B. Erasures or other changes in the Bid Prices must be initialed by the Bidder.

NOTE: ONLY BIDS WRITTEN IN INK OR TYPEWRITTEN AND PROPERLY SIGNED BY A OFFICER OF THE FIRM OR AUTHORIZED REPRESENTATIVE WILL BE ACCEPTED. PENCIL FIGURES OR PENCIL SIGNATURES WILL DISQUALIFY BIDDER.

- C. BIDS MUST BE ENTERED ON PROPOSAL FORMS EMBODIED IN THESE SPECIFICATIONS AND SHALL REMAIN ATTACHED THERETO, OR BIDS WILL NOT BE CONSIDERED.

1.14 ESCALATION

Firm Proposals are desired and no proposal containing an escalation clause will be considered unless the limits of escalation are clearly defined.

1.15 INFORMALITIES

Paragraph (6) of Section A - General Specifications is hereby amended to read, "The Sewerage and Water Board reserves the right to reject any and all bids or proposals for just cause. The Board may waive informalities in the lowest bid or proposal and accept that bid or proposal, if this should appear to be in the best interest of the Board."

1.16 DEPOSIT OR BID BOND

The amount of the deposit or bid bond for this contract as required in **Paragraph No. 1, in Section "A" of the General Specifications** shall be five percent (5%) of the total amount of the proposal made payable to the Sewerage and Water Board of New Orleans and subject to forfeiture upon failure to sign contract and execute all required bonds within ten (10) days after official award of the contract.

1.17 PERFORMANCE BOND

Bidder attention is called to **Paragraph 8 of Section A of the General Specifications**, relating to the furnishing of 100% performance bond, which shall be amended by adding to it the following statements: (R.S. 38: 2219) "Any surety bond written for a public works project shall be written by a surety or insurance company currently on the U. S. Department of the Treasury Financial Management Service List of Approved Bonding Companies which is published annually and in the Federal Register, or by a Louisiana Domiciled Insurance Company with at least A minus (A-) rating in the latest printing of the A.M. Best's Key Rating Guide to write individual bonds up to ten percent of policyholder's surplus as shown in the A.M. Best's Key Rating Guide, or by an insurance company that is either domiciled in Louisiana or owned by Louisiana residents and is licensed to write surety bonds. In addition, any surety

bond written for a public works project shall be written by a surety or insurance company that is currently licensed to do business in the State of Louisiana."

1.18 PRE-BID CONFERENCE

A MANDATORY Pre-Bid Conference will be held on the date, time, and location listed in the advertisement and Instructions to Bidders section. Any Bidder failing to attend this Pre-Bid Conference will be considered A Non-Responsive Bidder.

PART 2.0 MATERIALS

2.01 DOMESTIC MANUFACTURE

- A. All equipment to be furnished and components of all items specified herein, except bearings, shall be of domestic produce, manufacture and assembly, i.e., manufactured and assembled within the limits of the United States. Parts must be available from suppliers that manufacture components in the USA. The Board reserves the right to waive this requirement if, in the opinion of the Engineer, it appears to be in the best interests of the Board.
- B. The name of a certain brand, make, model, catalog number, manufacturer or definite specifications indicated on the contract plans and/or included in specifications is used only to establish the standard for quality and/or function desired, and that the bidder is not restricted to a specific brand, make, manufacturer or specification named but that the brand, make manufacturer or definite specifications is used only to set forth and convey to prospective bidders the general style, type, character, and quality of product desired and that equivalent products will be acceptable as judged by the Engineer. **(See SECTION 2 PART 2.02)**

PART 3.0 EXECUTION

3.01 MOBILIZATION

This work consists of preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, supplies and incidentals to the project site; the establishment of all offices, buildings and other facilities necessary for work on the project and the costs of bonds and any required insurance, and any other pre-construction expense necessary for the start of the work, excluding the cost of construction materials.

Contract 30238 does not include a pay item for mobilization.

3.02 COMPLETION TIME

- A. The work and work schedule requirements of this contract shall be completed in all respects and tendered to the Board for acceptance within 365 calendar days from the date of "Notice to Proceed". There will be two (1) year renewal option on **Contract 30238**.

- B. The work performed within the time frame stated above shall also include repair of damages to public or private property, complete cleanup of the premises, and completion of all items generated by the Engineer's final inspection.
- C. Contractor shall direct the full force of his efforts toward completion of the work within the time stipulated. ***Liquidated Damages and imposed penalties as defined in SECTION 2 PARTS 1.22 AND 1.23 of the Supplementary Special Contract Provisions*** will be rigidly enforced for failure to start work or failure to complete work on time. The Contractor may request a extension in days without accruing liquidated damages for delays in work orders as approved by the Engineer. The request for the extension in days shall be in writing and submitted with the invoice.
- D. The Contractor shall have on hand sufficient materials to perform the work that is listed within ten days of the Notice to Proceed. Work should progress continuously until the job is complete with the exception of nights, weekends, and holidays unless authorized by The Engineer.

* * * END OF SECTION 1 * * *

SECTION 2

SUPPLEMENTARY SPECIAL CONTRACT PROVISIONS

PART 1 GENERAL

1.01 ORGANIZATION OF SPECIFICATIONS

The Specifications are separated into sections for convenience of reference. These separations do not establish limits to the Contract between the Contractor and Subcontractors or between Subcontractors.

1.02 GENERAL SPECIFICATIONS AND THEIR APPLICATION

The fact that certain paragraphs of the General Specifications have been specified as applying to this contract does not in any way imply that paragraphs not quoted do not apply; in all cases where the General Specifications are not directly contradicted by these Special Specifications, the General Specifications shall have full force and effect; nor shall the fact that certain clauses of the General Specifications refer to operations not constituting a part of the work of this contract be construed as in any way weakening the binding force of the General Specifications in the remaining clause.

1.03 CONFLICT BETWEEN THE GENERAL AND SPECIAL SPECIFICATIONS

In case of any conflict between the "General Specifications" herein and these "Special Specifications", the latter shall govern.

1.04 CONFLICT BETWEEN DRAWINGS AND/OR SPECIFICATIONS

- A. In case of the conflict between the bid documents (drawings and the specifications), the Engineer shall be the sole authority in determining which of the two shall take precedence in the Contract Documents. Such conflict shall not be a basis for an extra expense to the Board.
- B. The Contractor is hereby cautioned to base his price and work upon the more costly item in event of conflicts, which may exist within either the specifications or the contract drawings, and no claim for extra expense will be entertained on this basis.

1.05 CONTRACT DRAWINGS AND SPECIFICATIONS FROM THE BOARD

- A. The Engineer will furnish to the Contractor free of charge, one (1) set of specifications and one (1) set of reproducible drawings for the Contractor's use. Reproduction costs shall be borne by the contractor. The Engineer will also furnish ten (10) copies of any revised drawings.
- B. The work shall be executed in strict conformity with the contract specifications, and the Contractor shall do no work without proper instructions.
- C. Contract drawings are descriptive of the work to be performed and are to be used for General Guidance only. Contractor shall take and verify all measurements and dimensions in the field.

Do not scale. Contractor shall assume all responsibility for failure to take proper and accurate measurements.

- D. These plans and specifications shall be considered to be complimentary, one to the other, and work indicated in/on one shall be as binding as if indicated in both. Discrepancies between drawings and specifications or any clarifications deemed necessary shall be brought to the attention of the Engineer prior to the submission of a bonafide bid. Submission of a bonafide bid indicates that the Contractor has been adequately informed on all phases of the work and that he can and will perform in accordance with these plans and specifications.
- E. All equipment shall be installed in accordance with the manufacturer's recommendation and any conflicting data shall be verified before bids.
- F. After award of contract, **the Engineer's interpretation of these documents shall be final.**

1.06 INFORMATION AND CLARIFICATION FOR PROSPECTIVE BIDDERS

Prospective bidders may obtain clarification regarding questions arising from the interpretation of the Contract Documents by contacting the Sewerage and Water Board Purchasing Agent, Room 133, 625 St. Joseph Street, New Orleans, LA, 70165, (504) 585-2124.

1.07 BIDDERS TO EXAMINE LOCATION AND PLANS

Each Bidder shall make a personal examination of the location of the proposed work and of the surrounding area. The Bidders shall thoroughly acquaint themselves with the details of the work to be done and all the conditions and obstacles likely to be encountered, including soil conditions, in the performance and completion of work. Bidders shall inform themselves as to the facilities for the transportation, handling and storage of equipment and materials.

Each bidder shall carefully study the plans, specifications and other contract documents and thoroughly educate themselves as to the conditions under which the work is to be done; the character, qualities and quantities of work to be performed; materials to be furnished; and be prepared to execute a finished job in every particular site.

No extra compensation will be accepted except as may be specifically provided for elsewhere in these Contract Documents.

Contractors shall comply with Sewerage & Water Board of New Orleans Storm Water Prevention Plans (SWPPP) and Storm Water Best Management Practices (BMP) Requirements as detailed in Attachment (**SECTION 2-Attachement 1**).

1.08 BIDDERS QUALIFICATIONS

Bidders shall be known to be skilled and reputable Contractors qualified to do the type of work described by the Contract Documents. Proposals from others will not be considered. These qualifications shall be

in addition to those required by the Louisiana State Licensing Board for Contractors under LA-R.S. 37:2150 through 37:2163, as amended.

1.09 PROPOSALS FROM LICENSED CONTRACTORS

Proposals will be received from only those Contractors who are licensed by the Louisiana State Licensing Board for Contractors under Louisiana Revised Statutes 37:2150 through 37:2163 as amended and are qualified under the provisions of the said act to perform the work called for in these specifications. Any bid in the amount of \$50,000.00 or more that does NOT show the Contractor's license number on the bid envelope will be automatically rejected, and will be returned to the bidder stamped "REJECTED" and will NOT be read aloud at the public bid opening.

1.10 AWARD AND SIGNING OF CONTRACT

The proposal submitted by the lowest bidder will be tentatively selected by the Sewerage and Water Board at its next scheduled Finance Committee meeting of the Board after the date of opening bids provided that the lowest proposal is acceptable to the Sewerage and Water Board. The final award of the contract will be made at the subsequent Board meeting. All prices bid must be held firm for 120 days or until final award of contract by the Board. The Board reserves the right to reject any one or all bids for just cause and to waive informalities in Bidding.

After submittal of required Insurance and Bonds, in form acceptable to the Sewerage and Water Board, the selected Bidder will be authorized by the Executive Director of the Board to appear before the Notary for the Sewerage and Water Board of New Orleans to sign the contract within ten (10) consecutive calendar days from the date of the notice.

1.11 INSURANCE CERTIFICATE

The Contractor shall submit the required insurance certificates no later than 10 days after Notification of Award of the contract. ***INSURANCE REQUIREMENTS (AMENDED): refer to SECTION A-1 Parargraph (16)***

1.12 WORKERS' COMPENSATION AND UNEMPLOYMENT COVERAGE WORKERS' COMPENSATION:

The Contractor expressly agrees and acknowledges that it is an "independent contractor" as defined in LSA-R.S.23:1021(6). That its employees shall not be considered employees of the Board for workers' compensation coverage, and that the Board shall not be liable to the contractor or its employees for any workers' compensation benefits or coverage.

EXCLUSION OF UNEMPLOYMENT COMPENSATION COVERAGE:

Contractor herein expressly agrees and acknowledges that it is an "independent Contractor" as defined in LSA-R.S.23:1472(E), that neither the contractor nor any one employed by the Contractor shall be considered an employee of the Board for the purpose of employment compensation coverage.

1.13 S&WB RIGHT TO AUDIT PROVISION

The Board shall have the right to audit by its personnel or its authorized representative, at all reasonable times, any and all records pertaining to the administration of this contract by the contractor, including its records of any subcontractor (s) employed on the contract. Such records shall be made and kept by the contractor in accordance with generally accepted accounting principles and practices. Records shall include, but are not limited to, accounting records, daily reports, correspondence and subcontract files (hard copies as well as computer readable data, if it can be made available). Records subject to audit

shall also include, but not be limited to, those records necessary to evaluate and verify direct and indirect costs (including overhead allocations) as they may apply to cost and/or change order requests associated with this contract. The Board also reserves the right to interview employees, make photocopies, and inspect any and all records at a reasonable time for a minimum of three (3) years after completion of the project or formal acceptance by the Board of the contract. Contractors shall be required to retain such files of the project as described herein for a minimum of three (3) years after completion of the project or formal acceptance of the contract by the Board.

1.14 EQUAL EMPLOYMENT OPPORTUNITY

- A. In all hiring, employment, or other activity made possible or resulting from this agreement, there shall not be any discrimination against any employee, or applicant for employment because of age, race, color, religion, handicaps, sex, or national origins, and where applicable, affirmative action will be taken to ensure that employees are treated during employment without regard to their age, race, color religion, handicaps, sex and national origin. This requirement shall apply to, but not be limited to, the following: Employment, upgrading, demotion or transfer, recruitment and advertising, layoff or terminations, rates of pay or other forms of compensation, and selection for training, including internship and apprenticeship.
- B. All solicitations or advertisements for employees shall state that all qualified applicants will receive consideration for employment without regard to age, race, color, religion, handicaps, sex or national origin.

1.15 LABOR STANDARDS

- A. The minimum wages to be paid laborers and mechanics shall be the prevailing wages for corresponding classes of laborers and mechanics employed on projects of a character similar to the contract work; said prevailing wages to be determined by the Secretary of the U.S. Department of Labor. (***See Appendix C***)
- B. The successful bidder is to make available to the Board, complete records in connection with payment of employees during the term of the job in order to permit the Internal Audit Division to check as to adherence to the wage scale presently in effect in accordance with U.S. Government standards.

1.16 DRUG FREE WORKPLACE POLICY

- A. It is the policy of the Sewerage and Water Board that all workplaces and facilities be kept drug and alcohol free at all times.
- B. In order to ensure compliance with this policy, the Board has approved and implemented the "Drug Free Workplace Policy" which is attached hereto in (**Appendix B**) and which shall be implemented and rigidly enforced on this contract.

1.17 OTHER CONTRACTOR WORK

The contractor is required to fully support each contract awarded and each work order assignment thereafter. In the event that a single contractor holds multiple contracts; work on other contracts and emergencies on other contracts shall not halt work or the efficiency of any work on this contract.

1.18 SAFETY

The Contractor shall take proper precautions to safeguard the public, SWBNO employees, the contractor's work force and the Board's facility during his work. Only Engineer approved methods of construction shall be used.

The completed installation and operations during installation shall comply with the Occupational Safety and Health Act (OSHA) and all changes in effect at the time proposals are submitted. Particular attention shall be directed to safety regulations for excavations and confined space entry.

At all times during the course of this contract, the contractor will be in compliance with all federal, state, and local health and safety requirements, will allow inspection of the worksite by the Sewerage and Water Board's Safety Unit, and will provide copies of his written safety program and written safety procedures to the Board's Safety unit within one calendar week if required by the Board's Safety Unit. A senior employee of the contractor and/or any subcontractor will review the Sewerage and Water Board Safety Orientation Notice (Notice), and will explain the information in this Notice to every employee who will enter Board facilities or jobsites. This notice is included in **Appendix B** as an attachment to the specifications for this contract.

1.19 SITE SECURITY

All Contract Employees who enter Sewerage and Water Board Facilities shall have current and legible picture ID Badges issued by the Contractor. No one will be allowed to enter the Facilities without displaying this badge, which shall also be worn and visible at all times.

The Contractor shall insure that the site is properly secured at the end of each workday. Fences shall be intact and the gates locked. The Contractor shall also provide and maintain all necessary flagmen, watchmen, barricades, plate, devices as required for the protection and safety of the work and the public against personal injury and property damages. The Contractor will be responsible for any and all damages, injury or loss resulting from his failure to provide such necessary protective precautions. The

Contractor is responsible for the site security 7 days from the issuance of the work order. There is no additional pay for this item.

1.20 PAYMENTS

- A. Payments for work to be done under this contract will be made by the Board in accordance with ***Paragraphs (55) through (58) of Section A-1 of the General Specifications***.

Initial payment to the Contractor will be predicated upon his compliance with these specifications relative to securing of all necessary permits and properly adhering to the notification process outlined in ***SECTION 5 ORDERING OF WORK***.

- C. Credits to be allowed the Board by the Contractor for work abandoned or not to be done shall be calculated on the same basis as "Extra work".
- D. Payments for extra work, whether unit price work, lump sum work, or force account work will be made and retainers will be withheld on items of extra work in the same manner as on the items bid on the original proposal.
- E. Retainer: "The percentage of the value of the work done..." which will be retained by the Board as referred to ***Paragraph (60) of Section A-1 of the General Specifications*** is defined as follows:
1. On contracts that are priced \$500,000.00 or more, the Board shall withhold 5% of the total amount earned, as billed, until the contract is finally accepted and a clear Lien and Privilege Certificate is submitted. Payment for material stored shall be made at 90% of the paid invoice value and 5% retainage will be withheld from this amount.
 2. On contracts priced less than \$500,000.00, the Board shall withhold 10% retainage.

1.21 PAYMENT FOR MATERIAL DELIVERED TO JOB SITE

The Board may make allowance for material delivered to the job site but not yet used in construction, in accordance with ***Paragraph 58 of Section A-1*** of the General Specifications, provided that conditions of security and areas for storage on the jobsite are judged suitable by the Engineer to adequately protect the interest of the Board. The allowance will be in the form of advanced payment for the material, as defined in ***Paragraph 58***. Ninety (90%) percent of the value of the materials as delivered, as represented by invoices, will be included in the estimate. The amount of the retainer will then be subtracted from the total estimate (composed of the work done plus 90% of the invoice price of the material).

1.22 LIQUIDATED DAMAGES FOR FAILURE TO START OR COMPLETE ON TIME

Should the Contractor fail to commence or start the work within the time allotted or fail to complete individual phases of the work within the times allotted for said individual phases, the Contractor shall pay to the Board the sum of \$2,000.00 liquidated damages for each calendar day beyond the times specified. If unforeseen circumstances are encountered at the work site, the Contractor may request

in writing an extension in days for the completion of work. If granted, the extension of time must be approved in writing by the Engineer and submitted with the invoice.

The Board shall retain the amount of such damages from any money due or to become due the Contractor under this contract without the necessity of the Board putting the Contractor or his Surety, either or both, in default. Special notice is hereby given to all Contractors that the terms stipulated in **PARAGRAPH 26 OF SECTION A-1 OF THE GENERAL SPECIFICATIONS, titled "FAILURE TO START, FAILURE TO COMPLETE"** as well as the liquidated damages specified in the above subparagraphs will be strictly interpreted and rigidly enforced.

1.23 IMPOSED PENALTIES

A. Failure to Notify

An imposed penalty of 10% of the total work order amount will be imposed for each failure to notify the Sewerage and Water Board Communication Department and The City of New Orleans Department of Public Works in advance of scheduled work. Notification shall be made to the Sewerage and Water Board 72 to 48 hours in advance of any scheduled work. Notification shall be made to The City of New Orleans Department of Public Works 72 to 48 hours in advance of any scheduled work in the Rights of Way listed in **APPENDIX F NOTIFICATION STREETS**. Notification shall be in writing and written approval shall be obtained and submitted with the invoice for all work.

B. Failure to Take Over Job Site

An imposed penalty of 10% of the total work order amount will be imposed for failure to start work within 5 days of the issuance of a Work Order. For the purposes of this subsection, "failure to start work" shall include the failure to erect approved site safety barricades bearing the contractor's information. After the initial 5 day period, an additional 10% will be deducted from the total work order amount for every 10 days the Contractor has failed to start the work or has failed to complete the work on time.

Emergency work will take priority and the Contractor may request additional days on their work orders from the Engineer for the given contract. Penalties shall not be incurred in the event of an emergency as approved in writing by the Engineer.

SWBNO shall require the contractor to be able to fully support each contract retained. In the event that a single contractor holds multiple contracts, emergencies on one contract shall not halt work or the efficiency of any other contracted work.

- C. The Contractor shall start each work order within 15 days of said receipt of work order transmittal.
- D. The Contractor shall complete each work order within the time specified in **SECTION 5 ORDERING OF WORK, PART 3**. Failure to complete work within the time allocated for each specific work order shall result in a 10 % deduction of the total work order amount as specified in **SECTION 5 ORDERING OF WORK, PART 3** and then again an additional 10% penalty for every 10 days thereafter.
- E. Liquidated Damages will be imposed for any work order remaining open after the expiration of the one year contract term.
- F. Emergency work will take priority and the contractor may request additional days on their work orders from the Engineer for the given contract. Penalties shall not be incurred in the event of a subsequent emergency as approved by the Engineer.

PART 2 MATERIALS

2.01 CONTRACTOR'S PLANS, SAMPLES, AND DATA

All material submittals shall be submitted prior to receipt of any work order subject of said submittal. All submittals, regardless of origin, shall be stamped with the approval of the Contractor and identified with the name and number of the contract, Contractor's name, and references to applicable specifications paragraphs and contract drawings. Each submittal shall indicate the intended use of the item in the work. When catalog pages are submitted, applicable items shall be clearly identified. The current revision, issue number, and date shall be indicated on all drawings and other descriptive data.

All Invoices shall be submitted with current as-built drawings, video inspections, Geospatial information (GIS) Data, etc...supporting the work completed within the contract period.

The Contractor shall accept full responsibility for the completeness of each submission and shall verify that all exceptions previously noted by the Engineer have been taken into account.

The Engineer shall be allowed 28 working days to process the above listed drawings, lists and diagrams. The Engineer's approval shall not relieve the Contractor of responsibility for correctness of his submittals. The Contractor shall bear any costs or expense incurred to revise or replace material or equipment, furnished in accordance with his submittals, so as to bring the work into conformance with the drawings and specifications.

Any need for more than one resubmission, or any other delay in obtaining the Engineer's review of submittals, will not entitle the Contractor to extension of contract time unless delay of the work is

directly caused by a change in the work authorized by a Change Order or by failure of the Engineer to return any submittal within 28 working days after its receipt in the Engineer's office.

NOTE: The fact that the Contractor furnishes on the job items that are listed in the specifications and not a substitution does not relieve the Contractor from furnishing submittals to the Engineer as stated in the preceding paragraphs.

The contract documents are prepared to establish the intent of the required construction. Approval of the contractor's submittals, which may be based upon items different from that specified and/or shown on the plans and specification, shall NOT relieve the contractor of all costs necessary and proper to make the items fit and function in accordance with the evident intend, all as judged by the Engineer.

2.02 SUBSTITUTE MATERIALS AND EQUIPMENT

All materials and/or equipment indicated on contract plans and/or included in specifications by Manufacturer's Name, Catalog or Model Number has been selected to establish a standard for quality and/or function. If the Contractor wishes to substitute Material and/or Equipment of another Manufacturer because of availability or as "an equal" he shall, after signing of contract, comply with the following:

- A. Such Materials and/or Equipment must be submitted for Engineer's approval within forty-five (45) consecutive days after signing of contract and thereafter approved as "Equal" by the Engineer.
- B. If Contractor fails to submit the Materials and/or Equipment substitutions within forty-five (45) days limit or if any one of the Materials and/or Equipment submitted within specified period is not approved by the Engineer, then only Materials and/or Equipment specified in the Contract Documents will be accepted.
- C. The term "Equal" used herein is defined as meaning "Equal", in the opinion of the Board Engineer, with regard to quality, fit, finish, and utility.
- D. No more than one submittal of a Material and/or Equipment substitute for each item of Material and/or Equipment indicated on drawings and/or included in specifications will be reviewed for approval by the Board Engineer.

2.03 PRIOR APPROVAL

All bids must be based upon the specified items. If the Contractor wishes to substitute "or equal" prior to the bid opening, he shall be responsible for the substitution's equality to the item(s) specified. The Board will entertain prior approval of substitutions up to 14 working days before bid opening. The Board reserves the right to evaluate the equality of the substitute item(s) and its decision regarding the acceptability of the item(s) will be final.

2.04 CODES AND STANDARDS

Wherever in the Contract Documents references are made to NEC, NESC, AWWA, ASTM, ANSI, NEMA or any other standards or requirements, it shall be understood that the most current issues of the standards or requirements of the National Electrical Code, National Electrical Safety Code, American Water Works Association, American Society for Testing and Materials, American National Standards Institute, National Electrical Manufacturers Association, etc., are intended and shall apply, except where specific dates are specified and except to the extent that the standards or requirements may be in conflict with applicable laws, regulations, ordinances, etc., of the State of Louisiana or the City of New Orleans.

2.05 MATERIALS BY CONTRACTOR AND MATERIALS BY OTHERS

The Contractor shall furnish all materials required for the various items of work except where specifically shown otherwise in the Contract Documents.

2.06 CONTRACTOR'S WORK

- A. The Contractor shall furnish, deliver, and unload all materials, tools, appliances and rigging necessary for the completion of this Contract as covered by these specifications.
- B. The Contractor shall furnish all labor, skilled and unskilled.

PART 3 EXECUTION

3.01 PRECONSTRUCTION CONFERENCE

- A. After the time specified in the Notice to Proceed, or as agreed by the parties, but before Contractor starts any portion of the work on the contract, a conference shall be held for review and acceptance of the schedules referred to in **SECTION 2 PART 3.04**, to establish procedures for handling submittals, securing of Permits, and for processing applications for payment, and to establish a working understanding among the parties as to the work, protection of existing facilities, conflicts with other utilities or owners, and other pertinent items associated with the Contract.
- B. The Conference shall be attended by the Sewerage & Water Board of New Orleans Engineer, the Contractor and his jobsite Superintendent, principal Subcontractors, representatives of principal suppliers as deemed necessary and appropriate and others as deemed advisable by the Contractor, the Board or the Design Engineer.

3.02 EXECUTION, CORRELATION AND INTENT OF DOCUMENTS

It is understood that except as otherwise specially stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, light, power, transportation, superintendence, temporary construction of every nature, and all other services and facilities of every nature whatsoever necessary to execute, complete, and deliver within the specified time.

3.03 ORDER TO START WORK AND COMPLETION OF WORK

- A. After the contract has been signed, the Engineer will issue a "Work Order" directing the Contractor to start work at a point or points designated within 5 calendar days after the date of receipt of work order transmittal. The "Work Order" shall be the Contractor's authority to purchase materials for use on this contract; materials ordered by the Contractor before the "Work Order" has been issued are ordered at his own risk and the Board has no obligation concerning them.
- B. The Contract shall be completed in every respect, including the repair of all damaged public or private property resulting from the work of this contract, within the specified number of calendar days.

3.04 BEFORE STARTING CONSTRUCTION

Before undertaking each part of the work, the Contractor shall carefully study and compare the contract documents and check and verify pertinent figures shown thereon including all pertinent field measurements. Contractor shall promptly report in writing to the Engineer any conflict, error or discrepancy that the Contractor may discover. Prior to commencement of work under this Contract or the continuance of any work hereunder or under any modification to the Contract Documents, Contractor shall provide written notice to the Engineer of any defects in the plans and specifications and the specific engineering reasons thereof, and of any prospective damages to persons or property that could be or would be caused by the work and/or duties to be performed under this contract.

Prior to beginning the work, the Contractor shall submit to the Engineer an estimated progress schedule indicating the starting and completion dates of the various stages of the work, and a preliminary schedule of values of the work.

If for any reason the work cannot be completed in whole or part in accordance to the standard specifications the Contractor shall inform the Engineer and provide recommendations for approval. The contractor shall obtain the approval in writing and supply all documentation for changes in the scope of work.

3.05 PERMITS AND CERTIFICATES

Before commencing work, the Contractor shall obtain at his own expense any permits from the City of New Orleans Department of Public Works, City of New Orleans Building Inspection Division, and/or Louisiana Department of Transportation that are necessary. The Contractor shall also secure at his own expense any necessary inspection certificates required after the work is done.

Evidence of compliance shall be furnished to the Board prior to starting work in the case of permits or within 10 calendar days after completion of that work requiring inspection certificates.

Delays caused by third parties shall bear no costs to the Board.

3.06 CHANGES

- A. Minor changes or additions to the contract (defined as those changes or additions which do not change the total cost of the contract or those which do not increase or decrease the total cost of the contract by an amount exceeding 5% of the base bid of the original contract) may be made by the Engineer upon written notice to the Contractor.
- B. Changes of greater extent or value may be made only by resolution of the Board, when such changes are deemed necessary or desirable to improve the quality or efficiency of the work, or to make these specifications operative, or to facilitate the Contractor without injury to the interests of the Board. Any work done by the Contractor without such resolution is done at his own risk, and the Board assumes no responsibility therefore.
- C. No notice of such change shall be required to be made to the Contractor's Surety and neither the Contractor nor his Surety shall be, in any manner, relieved of any obligation which they have assumed under this contract by or through such change or changes as may be made.
- D. Increase or Diminution of Quantities; The Board reserves the right to alter the quantities of work included in this Contract as may be found to be necessary or desirable. Such increases, decreases and/or other alterations shall not invalidate the Contract nor release the Surety and the Contractor. The Contractor agrees to accept the work as altered, the same as if it had been part of the original Contract. No claims shall be made by the Contractor for any loss of anticipated profits because of any such alteration, nor shall such alteration be considered as waiving or invalidating any conditions or provisions of the Contract.

3.07 LINES AND GRADES

Paragraph 46 of Section A-1 of the General Specifications is amended to read as follows:

"The Engineer will establish permanent control points for the centerline of the construction and a control benchmark for elevations. From these established control points and the benchmark, the Contractor shall establish all locations and grade of the work and shall be solely responsible for the exact position of all parts of the work with reference to the established line and the benchmark. The Contractor shall maintain his own field engineering force, for this purpose, that of the Engineer being for checking the Contractor's locations only. The Contractor shall furnish, free of charge, all stakes, permanent bench construction, templates, instrument platforms, and other materials necessary for marking and maintaining points and lines given, and shall furnish the Engineer such assistance as he may require in checking the layout of the work. The Contractor will be held responsible for the protection of all stakes and marks and if, in the opinion of the Engineer, benches or lines established by the Engineer have been destroyed or disturbed, they shall be replaced at the Contractor's expense."

3.08 SURVEY AND LAYOUT DATA

All field books, notes and other data developed by the Contractor in performing surveys required as part of the Work shall be available to the Engineer for examination throughout the construction period. All

such data shall be submitted to the Engineer with the other documentation required for final acceptance of the work.

Contractor shall keep neat and legible notes of measures and calculations made by him in connection with the layout of the Work. Copies of such data shall be furnished to the Engineer or Resident Project Representative for use in checking Contractor's layout as provided under **SECTION 2 PART 3.07 LINES AND GRADES**. All such data considered of value to the Board will be transmitted to the Board by the Engineer with other records upon completion of the Work

3.09 OPERATIONS AND MATERIAL STORAGE AREA

- A. After taking control of the job and securing necessary permits the Contractor may secure storage at the work site for work operations, etc., contingent upon the Engineer's approval. At the time approval is granted, the Engineer will outline the particular qualifications to be imposed in the use of that area. If materials are stored anywhere within the area without this approval, the Engineer, at his discretion, can order them moved to a more suitable location.
- B. All operations of the Contractor including storage of material on Sewerage and Water Board's premises shall be confined to areas authorized or approved by the Engineer. The Contractor shall hold and save the Sewerage and Water Board harmless from liability of any nature occasioned by his operations.
- C. Temporary buildings (storage sheds, shops, offices, etc.,) may be erected by the Contractor only with the approval of the Engineer, and shall be built at no cost to the Sewerage and Water Board. Such temporary buildings and utilities shall remain the property of the Contractor and shall be removed by him at his expense upon completion of the work.
- D. No equipment or material shall be placed where access to any facility will be obstructed in the event of a breakdown.
- E. No materials or equipment may be placed over underground structures whenever such storage or use may impair effectiveness or limit maintenance, or impose excessive loadings.
- F. The Engineer may order moving of materials of equipment at no cost to the Board even from places where approval has been granted if it becomes necessary to the operation of the Board's facilities because of things unforeseen at the time of approval, such as breakdowns, failures, etc.
- G. Any area occupied by the Contractor shall be cleaned up in accordance with the requirements of **PARAGRAPH NO. 54, IN SECTION A-1 OF THE GENERAL SPECIFICATIONS**.
- H. The Sewerage and Water Board assumes no responsibility for any loss of or damage to the Contractor's material, tools, or supplies.
- I. Trees and shrubs shall not be cut or damaged without the permission of the Engineer.

3.10 WATER AND OTHER UTILITIES

- A. It shall be the responsibility of the Contractor to make all necessary arrangements for the provision of water, electricity, drainage, sanitary sewage disposal, gas, compressed air, communications, fiber-optics and any other utility service required to prosecute the work of this contract.
- B. Water used by the Contractor at the jobsite will be furnished by the Board at a cost to the Contractor. Contractor shall familiarize himself with “Sewerage and Water Board of New Orleans Hydrant Meter Installation Non-potable (Standard) and Potable (Special Festival) Water Use” Policy and Procedure. These documents are available on the Sewerage and Water Board’s Web site: http://www.swbno.org/custserv_information_docs.asp.
- C. Contractor shall complete a hydrant meter application for his construction project for each location, if more than one is needed. The hydrant meter(s) shall be turned over to the Sewerage and Water Board every six (6) months for recalibration by the Board’s Meter Shop located at 8800 South Claiborne Ave. Each Hydrant Meter shall be returned to the Meter Shop at the end of the construction project otherwise forfeit the deposit(s).
- D. Costs of all other services shall be borne by the Contractor.
- E. Connections to fire hydrants shall only be made with meters obtained from the Sewerage and Water Board Customer Service Department, 585-2097, which shall record water usage for record purposes and which shall be returned to the Board as a condition of acceptance of the Contract. Application for the meter requires a \$1,500.00 deposit that is refundable upon return of the meter in undamaged and operable condition.
- F. If the bidder is selected as the lowest responsive and responsible bidder and is awarded this contract, then should the Contractor owe the Sewerage and Water Board of New Orleans (“Board”) any funds not relating to this contract by virtue of the Contractor having been previously provided any services from the Board such as water or any other service, the parties agree to discharge by set-off the Board’s debt and the Contractor’s debt once the Contractor submits its Request for Payment or any similar document such as a request, invoice, etc., in connection with the Contractor’s performance of work on this contract, both debts being at the time enforceable.

3.11 EMERGENCY TELEPHONE

The Contractor shall, before contract work begins, furnish to the Engineer Telephone Numbers at which company officers or responsible persons can be contacted at night, weekends and holidays in case of emergencies.

3.12 PROJECT WORK SCHEDULE

- A. Upon receipt of the "Work Order" transmittal the Contractor shall inspect and take over work sites within 5 working days. Within 15 days of receipt of work order and prior to commencement of any work on the contract, the Contractor shall be required to provide a schedule to complete work associated with the site including surface restoration. This document will be used in the preparation of work flow monitoring and payments to the Contractor. A sample Spreadsheet shall be submitted with the Work-Order Schedule with the required information as detailed in ***SECTION 2 ATTACHMENT 2 ROUTE SHEET.***
- B. The form of the combined schedule, although subject to change upon order of the Engineer, shall consist of:
 - 1. Separation of the entire construction work orders into its stages, as well as any specific related stages such as pipe work, restoration, inter-agency approval, material or equipment shipment, etc., in terms of actual progress.
 - 2. A listing of these construction stages with the proposed starting and completion date shown for each construction stage. At the end of each monthly increment, the Contractor shall indicate by a percentage figure directly on the schedule the completion he expects to attain for that interval.
 - 3. Shown directly below the expected completion percentage shall be an "actual progress" percentage completion indicated at monthly intervals intended to represent the actual progress toward completion for that interval.
- C. Since the combined cost-progress schedule to be submitted monthly is to be used in the preparation of work order assignments, it is imperative that the Contractor exercise careful consideration in assigning the percent complete expected on his proposed schedule. It is expected that the actual percent complete shall rarely exceed the proposed percent. The Contractor shall re-examine his proposed schedule monthly and alter it accordingly to insure this does not occur.
- D. Should it appear to the Board's Engineer that the cost breakdown on progress schedule is in error or proves inadequate; the Engineer will direct the Contractor to alter his form to make it comply with the requirements of the Board.
- E. Progress at each active repair site will be continuous and subject to normal work hours, work days and weather unless authorized by The Engineer.

3.13 JOB SITE DRAWINGS AND SPECIFICATIONS

- A. A complete and current set of contract drawings and specifications, including any addenda, shall be maintained on the job site by the Contractor.

- B. One copy of all approved shop drawings, equipment or material drawings, etc. shall be maintained on the job site by the Contractor.

3.14 CONTRACTOR'S RESPONSIBILITY FOR WORK

- A. The Contractor shall give personal attention to and supervise the work to the end so that it shall be prosecuted faithfully; and, when the Contractor is not personally present on the work, the Contractor shall be at all time represented by a competent superintendent or foreman who shall be present at the work and who shall receive and obey all instructions or orders given under this contract, and who shall have full authority to execute the same, and to supply materials, tools and labor without delay, and who shall be the legal representative of the Contractor. The Contractor shall be liable for the faithful observance of any instructions delivered to the Contractor or to the Contractor's authorized representative.
- B. Until final written acceptance of the project by the Board, the Contractor shall have the charge and care thereof and shall take every precaution against damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or non-execution of the work. The Contractor shall rebuild, repair, restore and make good all damages to any portion of the work, before final acceptance, including damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor; acts of God, of the public enemy or of governmental authorities and shall bear the expenses thereof.
- C. In case of suspension of work from any cause, the Contractor shall be responsible for the project and shall take such precautions as necessary to prevent damage to the project, provide for normal drainage and erect any necessary temporary structures, signs or other facilities at his expense.

3.15 BI-WEEKLY JOB MEETINGS

Once every two (2) weeks, or as determined necessary by the Engineer, on a date and location mutually agreed upon by the Contractor and the Engineer, a meeting shall be held for review of the Project and any open work orders including, but not limited to, the construction and inspection schedule, progress of the construction, traffic control, submittals and any other issues that may arise. The meeting may be used to review the Contractor's monthly application for payment. The Contractor shall preside over all these meetings, and shall arrange for subcontractors and material suppliers to be present as needed to discuss their specific work. The Contractor will keep and distribute minutes of each meeting to all attending parties.

3.16 ENVIRONMENTAL REQUIREMENTS - MEETING CONSENT DECREE CONDITIONS

- A. The parties agree that the work and duties required to be performed in accord with the Contract Documents shall meet and comply with all environmental requirements to include the laws and regulations of the United States and the State of Louisiana, and shall satisfy and be in accord with the provisions of the Consent Decree with attachments entered into by and between the BOARD

and CITY with the EPA and the UNITED STATES in the matter entitled "UNITED STATES OF AMERICA V. SEWERAGE AND WATER BOARD OF NEW ORLEANS, ET AL," No. 93-3212, United States District Court, Eastern District of Louisiana and all modifications thereof, which provisions the CONTRACTOR must acquaint itself and become familiar with prior to bidding on said Contract.

- B. The above mentioned Consent Decree is available on the Sewerage and Water Board web site, http://www.swbno.org/docs_consentdecree.asp
- C. CONTRACTOR specifically acknowledges the Board has made said Decree with attachments available for review and CONTRACTOR has read said decree with attachments or the pertinent parts thereof and is familiar with the terms and conditions thereof, and will pay any fines or penalties that will be assessed against the BOARD or CITY (or reimburse them therefore) which are imposed by the terms of said decree with attachments resulting from the actions of CONTRACTOR in performance of or its failure to perform its duties under this Contract.

3.17 REPORT, CONTAINMENT/BY-PASS AND CLEAN-UP

- A. The Contractor shall develop a plan to report, contain/by-pass and clean up all sewage spills or unanticipated hazards that would adversely affect the health of the community.

- B. **REPORT**

A report shall be given immediately to the S&WB Emergency Desk (942-2920). The information communicated in the report must include location, nature of problem, name of project, name of company performing work, name of the individual making the call, time of incident and other pertinent data as necessary. It should be communicated as a Priority I incident.

- C. **CONTAINMENT/BY-PASS**

The Board's first priority in operating its sewer system is to protect the public health of the citizens and the environment in the most cost effective manner possible.

The plan must consider all available options for immediately eliminating the discharge or diverting to a containment area, as well as options for containing the contents of, for example, a damaged main which will be evacuated during repair work. It is impossible to anticipate all the specific conditions and factors that may be relevant for any particular incident. Each incident will be unique.

To this end the Contractor will by-pass, direct and temporarily store sewage as the situation dictates to avoid contamination of soil, street, etc. that would place the citizens in contact with waste products. If these sewer wastes reach a canal it will be the Contractor's first effort to remove the contamination. Drainage pumping from the contaminated canal will be stopped.

In those circumstances when sewage cannot be removed from the canal system because of location or weather, where possible the procedures will be dilute and flush the canals.

Considerations

The following are some of the more significant considerations; which will impact the ultimate approach to mitigation activities.

- ❑ Can any or all of the discharge be returned to the sewerage system immediately? If so, how much, where and by what means?
- ❑ What is the anticipated duration of the repair activity?
- ❑ Can normal sewage flow be rerouted? If so how much?
- ❑ How many and which pump stations will be affected by isolation of the force main?
- ❑ Do any of the stations have the capability to bypass flow to the gravity system?
- ❑ How long can the normal sewage flow in the affected gravity sections be interrupted before property damage or upstream overflows occur?
- ❑ Is there the capability to create in-system containment by artificial draw down of the associated gravity system(s) and if so, how much?
- ❑ Is there the capability to create a containment area utilizing a drainage canal or catch basin, how would the flow be reintroduced into the sewerage system and could an effective clean-up of the containment area be accomplished? (One or more containment areas could be considered not only at the repair site but at an affected pump station or other location).
- ❑ Is there a capability to haul sewage (vac tanker, vac truck etc.) from either the repair site or anticipated up-stream overflow location?
- ❑ Is a rainfall event anticipated during the repair or clean-up activities?

Because of the varying conditions, locations and circumstances which have an impact on the planning process, the development of specific procedures is not practical. It is far more important for a response action plan such as included herein, to provide for the availability of the resources including senior management expertise, such that a response can be initiated in an expedient and thoughtful manner. As evidenced in other sections of this document, the Board has a policy of requiring Division and Department managers to be available on call 24 hours per day and to personally respond to all emergencies including Sanitary Sewer Overflows.

The ability to call on the experience of these managers as a matter of policy insures all possible avenues of mitigation are considered and all required resources are dedicated to this response effort.

D. CLEAN-UP/DISINFECTION

For public areas that have come in contact with overflowed sewage, the Contractor will take reasonable action to implement disinfection procedures. Generally, these procedures will involve an application of an oxidizing agent such as a dilute chlorine solution on constructed surfaces (streets, driveways, walls, etc.) and a lime application on organic surfaces (lawns, soil areas, etc.). The level and extent of disinfection will be determined in the field. It is not the intent of this disinfection procedure to infer that total pathogen destruction has been achieved, nor that any other level of disinfection has been achieved.

3.18 CONTRACTOR'S EMPLOYEES

The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the work any unfit person or anyone not skilled in the task assigned to him. The Engineer has the right to require the Contractor to remove any employee from the jobsite for just cause. Any contractor employee that is removed for cause shall be ineligible to return to any worksite for the duration of the contract.

3.19 OTHER CONTRACTS

The Sewerage and Water Board has, or may undertake, or award, other contracts for other, or additional work and this Contractor must fully co-operate with such other Contractors and Sewerage and Water Board employees and carefully fit his own work to such other, or additional work, as may be directed by the Engineer. This Contractor must not commit or permit any act that will interfere with the performance of work by any other Contractor or Sewerage and Water Board employees.

3.20 PARKING FACILITIES

Contractor personnel will not be permitted to park personal vehicles on S&WB property due to limited and restricted area available for this purpose. The Contractor will be allowed to bring construction equipment and construction vehicles only into the site as necessary in the execution of this contract but may be required to remove them if their presence interferes with the operation of the Board, at the discretion of the Engineer.

3.21 BOARD'S RIGHT TO OCCUPANCY

A. The Board will have full access to and full use of all existing utilities during the entire period of construction for the conduct of its normal operations. The Contractor shall cooperate with the Engineer and the Board in all construction operations to minimize conflict, and to facilitate Board usage.

- B. The Contractor shall at all times provide proper facilities for access and inspection of the work by representatives of the Board, the Engineer, inspectors, and any such official Governmental Agencies as may be designated by the Board as having jurisdictional rights to inspect the work.

3.22 INJURIES AND DAMAGES TO PERSONS AND PROPERTY

- A. The Contractor shall be held alone responsible for all injuries to persons, and for all damage to the property of the Sewerage and Water Board or others, caused by or resulting from the negligence of himself, his employees, or his agents, during the progress of, or connected with the prosecution of the work, whether within the limits of the work or elsewhere, and whether under the contract proper or as extra work.
- B. The Contractor must protect and support all water, sewer and gas pipes or other conduits and buildings, walls, fences or other properties that are liable to be damaged during the execution of his work. He shall take all reasonable and proper precautions to protect persons, animals and vehicles of the public from injury, and shall erect and maintain a fence or railing around all excavation and place a sufficient number of warning lights about the work and keep them illuminated from twilight until sunrise, and shall employ one or more watchmen, if required, as an additional security. He must, as far as practicable and consistent with good construction, permit access to private and public property and leave fire hydrants and catch basins and canals free from encumbrances. He must restore, at his own expense, all damaged property caused by any act of omission or commission on his part, or on the part of his agent, including sidewalks, curbing, sodding, pipes, conduits, sewers and other public or private property, to a condition as good as it was when he entered upon the work.
- C. In case of failure on the part of the Contractor to restore such property or make good such damage, the General Superintendent may upon forty-eight (48) hours' notice proceed to repair, rebuild or otherwise restore such property as may be deemed necessary, and the cost thereof, will be deducted from any monies due, or which may become due, under this contract.
- D. The Contractor shall indemnify and save harmless the Sewerage and Water Board from all suits and actions that may be brought against it by reasons or any injury, or alleged injury, to the person or property of another, resulting from negligence or carelessness in the execution of the work, or because of failure to properly light and guard the same, or on account of any act of commission or omission on the part of the Contractor, his representative or employees.
- E. There will be no direct payment for erection and maintaining a fence or railing around excavation, placing warning lights and providing watchmen and supporting and protecting utilities as prescribed in **(B)** above.

3.23 NIGHT, WEEKEND OR HOLIDAY WORK

Night, weekend or holiday work requiring the presence of an Engineer or inspector will be permitted only in cases of emergency, and then only to such an extent as is absolutely necessary and with the

written permission of the Engineer. In the event such work becomes necessary, no extra payment will be made. No work shall be performed outside of normal working hours and workdays without the prior approval of the Engineer.

3.24 SUSPENSION OF WORK

- A. The Engineer may order the Contractor in writing to suspend, delay or interrupt all or any part of the work for such period of time as he may determine to be appropriate. The Engineer may also suspend, delay or interrupt the work wholly or in part due to the failure of the Contractor to correct conditions unsafe for the workmen or the general public; for failure to carry out provisions of the contract; for such period of time as may deem necessary due to unsuitable weather; or for any other condition or reason deemed to be in the public interest.
- B. No adjustment to the time of completion for the project will be made if the suspension, delay or interruption to the work is ordered due to the fault or negligence of the Contractor; however, if such suspension, delay or interruption is ordered for reasons other than the Contractor's negligence, the period of such suspension, to be determined by the Engineer, shall be added to the time specified for the completion of the work under this contract.
- C. If the work is suspended for any reason, all materials delivered at the work but not yet placed therein shall be neatly stored so as not to constitute an obstruction.

3.25 INSPECTION AND ACCEPTANCE

- A. All work shall be subject to inspection and test by the Board at all reasonable times and at all places prior to acceptance. Any such inspection and test is for the sole benefit of the Board and shall not relieve the Contractor of the responsibility of providing quality control measures to assure that the work strictly complies with the contract requirements. Inspection or test shall not relieve the Contractor of responsibility for damage to or loss of the material prior to acceptance.
- B. The Contractor must promptly replace rejected material or correct any workmanship found by the Board not to conform to the contract requirements. The Contractor shall promptly remove rejected material from the premises.
- C. If the Contractor does not promptly replace rejected material or correct rejected workmanship, the Board (1) may, by contract or otherwise, replace such material or correct such workmanship and charge the cost thereof to the Contractor; or, (2) may terminate the Contractor's rights to proceed in accordance with the ***Paragraph 27 of the Section A-1 of the General Specifications***.
- D. The Contractor shall furnish promptly, without additional charge, all facilities, labor, and material reasonably needed for performing such safe and convenient inspection and test as may be required by the Engineer. All inspection and tests by the Board shall be performed in such manner as to not unnecessarily delay the work. Special, full size, and performance tests, shall be

performed as described in this contract. The Board reserves the right to charge to the Contractor any additional cost of inspection or test when material or workmanship is not ready at the time specified by the Contractor for inspection or test or when re-inspection or retest is necessitated by prior rejection.

- E. Should it be considered necessary or advisable by the Board at any time before acceptance of the entire work to make an examination of work already completed, by removing or tearing out same, the Contractor shall, on request, promptly furnish all necessary facilities, labor and material. If such work is found to be defective or nonconforming in any material respect, due to the fault of the Contractor or his subcontractors, he shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the contract, an equitable adjustment shall be made in the contract price to compensate the Contractor for the additional services involved in such examination and reconstruction and if completion of the work has been delayed thereby, he shall, in addition, be granted a suitable extension of time.
- F. Unless otherwise provided in this contract, acceptance by the Board shall be made as promptly as practicable after completion and inspection of all work required by this contract. Acceptance shall be final, and conclusive except as regards latent defects, fraud, or such gross mistakes as may amount to fraud or as regards to the Board's rights under any warranty or guarantee.

3.26 CONTRACT AND WORK ORDER CLOSE-OUT

Satisfactory project close-out is a condition of final acceptance of the Work and will be performed after the following is completed.

Contractor shall deliver to the Engineer all construction records, certifications, and other documents in accordance with these Contract Documents. All damaged or deteriorated surfaces shall be touched up or repaired to the satisfaction of the Engineer. All incomplete or defective work shall be remedied as required by the provisions stated herein for Inspection and Acceptance.

Contractor shall remove from the site all of his temporary structures, trailers, tools equipment, supplies, and unused or waste materials. Roads, fences, and other facilities damaged or deteriorated because of Contractor's operations shall be repaired to the satisfaction of the Engineer. All ground surfaces affected by Contractor's operations shall be restored by grading, raking, smoothing, and other necessary operations. The site shall be thoroughly cleaned and all rubbish, trash and debris removed.

Board issued hydrant meters shall be returned to the Sewerage and Water Board Meter Shop, 8800 South Claiborne Avenue, for final reading after completion of the Contract. Return of the meter is a condition of acceptance of the contract.

After all work is complete, any necessary changes in the Contract amount will be determined by the Engineer and the necessary adjustment, if any, will be incorporated into a final Change Order.

Upon satisfactory completion of closeout activities and delivery of Record Drawings to the Engineer, Contractor shall submit applications for Final Payment as provided in the General Specifications.

3.27 AS-BUILT DRAWINGS

- A. The Contractor shall furnish one (1) neat and legibly marked blue line set of contract drawings to depict actual "as-built" conditions.
- B. The "as-built" drawings shall show all construction, elevation, equipment, mechanical and electrical systems and connections as installed or built.
- C. The work under this contract will not be considered "complete" until "as-built" drawings, prepared to the satisfaction of the Engineer, are received.
- D. There will be no direct payment for furnishing the "as-built" drawings specified above.
- E. As-Built Drawings will not be required unless manholes have been added or the location of the main and service connections have been modified.

SECTION 2

ATTACHMENT 1

Storm Water Pollution Prevention Plan (SWPPP)

And

Storm Water Best Management Practices (BMP) Requirements

GENERAL

1. The contractor shall prepare and maintain a Storm Water Pollution Prevention Plan (SWPPP), which describes in specific details the Contractor's program to prevent contamination of the storm water collection system for this project. A suggested SWPPP Templates and Sample Inspection Report, as well as other valuable information can be found at EPA's website <http://cfpub.epa.gov/npdes/stormwater/swppp.cfm>.

2. Contractor shall implement, maintain, inspect and remove all erosion and sediment controls identified in the SWPPP. The program shall address both common construction activities and extraordinary events.

3. Contractor shall include Water Pollution Control Drawings (WPCD) in the SWPPP to illustrate the locations, applications and deployment of Best Management Practices (BMPs) identified in the SWPPP. The WPCDs shall be included as an attachment to the SWPCP.

4. Best Management Practices (BMPs): A Best Management Practice is a technique, process, activity, or structure used to reduce the pollutant content of a storm water or non-storm water discharge. BMPs may include simple, non-structural methods such as good housekeeping,

staff training, and preventive maintenance. Additionally, BMPs may include structural modifications such as the installation of berms, canopies or treatment control

5. The Contractor shall comply with laws, rules, and regulations of the State of Louisiana and agencies of the United States Government prohibiting the pollution of lakes, wetlands, streams, or river waters from the dumping of contaminants, refuse, rubbish or debris.

6. The contractor shall submit copies of the SWPPP (as per requirement of Section 2, Paragraph 2-20) a minimum of 10 working days prior to beginning construction, to the Engineer. **Construction shall not begin until the SWPPP is approved.** Contractor shall update the SWPPP as necessary during the work to prevent contamination of the storm

water collection system.

7. Before start of work, Contractor shall train all employees and subcontractors on the approved SWPPP and related WPCD and provide the Sewerage and Water Board with written documentation of said training.

8. Suggested BMPs can be obtained from Ella Barbe, LA DEQ Small Business Assistance Program, 201 Evans Rd. Bldg. 4, Suite 420 Harahan LA. Phone 504-736-7739, e-mail:

ella.barbe@la.gov

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CONSTRUCTION

The contractor shall keep a copy of the SWPPP on the job site. The contractor shall provide continuously at the jobsite all the tools, equipment, and materials necessary to implement the SWPPP at all times from project initiation through completion, including any punchlist or warranty work on the project. At a minimum the following requirements shall be met as applicable, to the maximum extent practicable, at construction sites:

1. Storm Drain System Protection: At the first order of work, the Contractor shall protect the existing storm drain system from entrance of construction debris and pollutants. Such protection shall include implementing the BMPs as outlined in the SWPPP. Protection shall prohibit the discharge of untreated runoff from temporary or permanent street maintenance/landscape maintenance material and waste storage areas from entering the storm drain system. Sediment that is generated on the project site shall be retained using structural drainage controls. In addition, the protection system shall have a minimum of three features: 1) a particulate filter of geosynthetic material securely fastened in place such that it cannot be bypassed without significant physical damage; 2) a prefilter for the particulate filter; and 3) on-hand materials to close off the inlet or opening in the case of a significant pollution spill. Contractor shall monitor and maintain all storm drain inlet protection devices during rain events to prevent flooding.

2. Material Management & Storage: No construction-related materials, wastes, spills or residues shall be discharged from the project site to streets, drainage facilities or adjacent properties by wind or runoff. All materials and/or equipment storage areas where liquid construction materials are placed shall be protected by a physical barrier capable of containing the entire volume of stored liquid materials. During active construction activities, portions of the barrier may be removed for access. However, the barrier materials must be readily accessible for replacement by onsite construction personnel. The barrier must be in place at all times during the absence of Contractor personnel at the storage site. Building materials shall be placed on pallets and covered in event of rain. Do not store materials in the street or gutter area.

3. Equipment & Vehicle Maintenance: Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained at the project site and shall not be allowed to discharge from the project site to streets, drainage facilities or adjacent properties by wind or runoff. The Contractor shall inspect vehicles and equipment on each day of use. Leaks shall be repaired off-site if possible. If necessary to repair on site, the runoff must be contained or the problem vehicle or equipment shall be removed from the project site until repaired. If necessary, drip pans shall be placed under the vehicles or equipment while not in use to catch and/or contain drips and leaks.

4. BMP Inspection: The contractor shall inspect all pollution control BMPs regularly. The Contractor shall also repair/replace any damaged or clogged element on a daily basis. During periods of precipitation where any runoff occurs, the system shall be checked twice a day, seven days a week, whether or not any work has been performed. The daily

checks shall be between 6 a.m. and 9 a.m., and 4 p.m. to 8 p.m. The contractor shall keep a monitoring inspection log of each inspection.

5. Spill Prevention & Cleanup Plan: Contractor shall have a spill prevention plan and spill cleanup materials readily available and addressed in the SWPPP. Spills shall be cleaned

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up immediately using dry methods if possible. Spill cleanup material shall be properly disposed off site. Contractor shall keep a record of any spills in the inspection log. In addition, at the end of the project, the Contractor must certify that all contaminated materials have been properly disposed in accordance with the SWPPP.

6. Asphalt & Concrete Activities: Asphalt and concrete activities shall be scheduled for dry weather. Contractor shall prohibit saw cutting during a storm event of 0.25 inches or greater. Store bags of cement away from gutters and storm drains, sealed and covered, protected from rainfall runoff and wind. Place tarp under cement mixer before operating to catch spills. Never dispose of cement washout or concrete dust onto driveways, streets, gutters or storm drains.

7. Sidewalk Washing: The following methods should be utilized to prevent discharge of sidewalk cleaning wastewater into the storm drain system:

- a. Sweep and pick up all areas to be cleaned before using water.
- b. Manually scrape gum from sidewalks and other surfaces.
- c. Must use high pressure and low volume of water with no additives and at an average usage of 0.006 gallons per square foot of surface area to be rinsed
- d. Use a wet/dry vacuum to collect wash water for disposal. Large volumes of wash water may require the use a small sump pump to remove wash water from the job site.
- e. One or more of the following methods are recommended to prevent pollutants from entering the storm drain system:
 - Sandbags can be used to create a barrier around storm drains. *
 - Rubber mats or plugs can be used to seal drain openings. *

- Temporary berms or containment pads help keep water on site. *
- Use berms of sandbags to direct wash water to landscaping. *
- Use large squeegees to accumulate sheet flow for collection.

* Remember to remove plugs, berms, and sandbags or you may be liable for possible flooding.

f. Wash water that may contain hazardous waste such as oil-saturated absorbents, water with lead or other heavy metals from oxidized paint, and solvent cleaners requires special treatment and must be disposed of through a hazardous waste facility.

8. Employee BMP Training: Contractor shall train employees and subcontractors on BMP implementation, general good housekeeping, and proper spill containment and cleanup. Before start of work, Contractor shall provide the Board with written documentation of training and keep all documentation in the SWPCP.

9. Inspection: Contractor shall inspect and repair or replace, as needed, all job site BMPs a minimum of:

- Biweekly
- Before, during and after a major rain event.

Contractor shall document the inspections in the SWPPP.

10. Dewatering: Avoid dewatering discharges where possible by using the water for dust control, infiltration, etc..

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* * * END OF SECTION 2 * * *

SECTION 3

TRAFFIC CONTROL AND REGULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Requirements for notification, signs, signals and traffic control devices.
- B. Qualifications and requirements for use of flagmen.

1.02 SUBMITTALS

The approved traffic control plan shall be submitted with the invoice along with the associated work order and must contain the date, location of work performed and City of New Orleans representative that approved the work.

1.03 MEASUREMENT AND PAYMENT

- A. Local Notification Streets: The department of Public Works maintains a list of local notification streets which includes but is not limited to the street listings in *APPENDIX F* . The contractor shall be paid on a unit price bid for traffic control plan if different than shown on Drawings and permitting, including obtaining approvals by local government that are maintained on this list. This unit price includes approval from Owner and any other entity prior to commencing work in their right-of-way, provision of traffic control devices, barrels, barricades, control panels, signage including arrow boards as necessary for the project, relocation of traffic signs and control devices as necessary, relocating and replacing existing signs and provision of equipment and personnel as necessary to protect the work and the public in accordance with the Manual of Uniform Traffic Control Devices (MUTCD).
- B. State Maintained Roadways: The contractor shall be paid on a unit price bid for permitting, including obtaining approvals by state and federal government . The Contractor shall be paid on a unit price bid for the preparation and submittal of traffic control plan if different than shown on Drawings, and subsequent approval from Owner and any other entity prior to commencing work in their right-of-way, provision of traffic control devices, barrels, barricades, control panels, signage including arrow boards as necessary for the project, relocation of traffic signs and control devices as necessary, relocating and replacing existing signs and provision of equipment and personnel as necessary to protect the work and the public in accordance with the Manual of Uniform Traffic Control Devices (MUTCD). The amount invoiced shall be determined based on the approved schedule of values for traffic control and regulation.
- C. No separate measurement and payment will be made for flaggers as required for the contract. Flaggers shall be considered incidental to the traffic control requirements.
- D. Local/Residential: All traffic controls for local and residential work that is not on the Department of Public Works most recently maintained List of “Notification Streets” are incidental. No separate measurement and payment will be made for the provision of traffic control devices, barrels, barricades, control panels, signage including arrow boards as necessary for the project, relocation of traffic signs and control devices as necessary, relocating and replacing existing signs and provision of equipment and personnel as necessary to protect the work and the public in accordance with the Manual of Uniform Traffic Control Devices (MUTCD).

1.04 NOTIFICATION REQUIREMENTS

- A. Notification and traffic control requirements shall strictly adhere to the requirements set forth in the General Specifications for Street Paving 2015 Edition issued by the Department of Public Works City of

New Orleans, Louisiana. Copies of the Specifications may be obtained from: City of New Orleans Department of Public Works 1300 Perdido Street - Room 6W02 New Orleans, Louisiana, 70112 Price: \$100.00 per printed copy or downloaded at no cost at <http://www.nola.gov/dpw/> The Contractor shall give no less than a 48 hours advanced notification of work and street impairment to the SWBNO public relations department, police, fire and other city departments and to the general public. The Contractor shall designate person(s) who can be contacted and shall be available on a 24 hour, seven days per week basis throughout the life of the project. The name and telephone number of the designated individual(s) shall be furnished to the Engineer prior to starting construction. The individual contacted shall be able to respond to emergencies occurring along the project area during normal, after work and holiday hours.

- B. The Contractor shall notify and shall obtain advanced approval for work in the roadway from the City of New Orleans Department of Public Works Traffic Division on designated roadways listed in *APPENDIX F –NOTIFICATION STREETS*. A traffic control plan indicating, in detail, the location of all signs, lights, and barricades must be prepared by the Contractor for the written approval of the City of New Orleans Department of Public Works Traffic Engineer, no less than two, nor more than ten working days in advance of implementation. It shall be the Contractor's responsibility to obtain these approvals in writing.
- C. The Contractor shall notify the City of New Orleans Department of Public Works Traffic Engineer immediately If the project requires changes or modifications to existing traffic control signs, parking meters, etc.

PART 2 MATERIALS

2.01 SIGNS, SIGNALS, BARRICADES AND DEVICES

- A. With reference to *Section 713 of the LDOTD Louisiana Standard Specifications for Roads and Bridges, Latest Edition*, Contractor shall be required to furnish, install and maintain temporary construction barricades, lights, signals, pavement markings and signs; provide flagmen; and comply with all other requirements regarding the protection of the work, workmen and safety of the public. Signs, barricades, temporary pavement markings, etc., shall conform to the details shown on the plans, the MUTCD (latest revision) and these specifications.
- B. Signs and barricades, and arrangements thereof, as shown on the plans, are minimum requirements and shall not be construed as negating requirements for additional proper and special signs and barricades, etc., as may be required by the Engineer. Appropriate signs for special conditions shall be furnished and installed as directed. Requirements as to proper signs, barricades or other safety precautions promulgated by the Contractor's insurers are not negated by these specifications. These specifications shall not be construed as relieving the Contractor of any of his responsibilities for the safety of the traveling public, for any liability in connection therewith, or compliance with City and State laws or ordinances.
- C. Traffic Cones and Drums, Flares and Lights: As approved by local jurisdictions

PART 3 EXECUTION

3.01 CONSTRUCTION REQUIRMENTS

- A. The Contractor is required to have all materials and equipment on hand before closing the roadway. The Contractor must submit a traffic plan to the City of New Orleans Department of Public Works and obtain their approval of the traffic plan prior to closing the roadway. A copy of the approved traffic plan shall be submitted to the Engineer upon request and shall be submitted with the invoice.

- B. Signs, barricades and related devices will be required when the Contractor's work is in progress on portions of the work covered by the Notice to Proceed, or when operations are suspended but the traveled portion of the road or sidewalk is not in a safe condition for the traveling public. During such times that barricades are not in place, appropriate regulatory signs shall be erected and maintained by the Contractor.
- C. All traffic control devices (roadway markings, signs, signals, signal controls, etc.) destroyed as a result of construction shall be replaced per City of New Orleans specifications at no cost to the Sewerage and Water Board.
- D. In no event shall construction work under the contract begin until notifications have been made and signs, barricades and other traffic control devices, as provided above, have been erected.
- E. The Contractor shall not obstruct the normal flow of traffic from 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. on designated major arterials or as directed by the Owner's Representative and The Contractor shall maintain fifty (50%) percent of the roadway accessible to vehicular traffic at all other times.
- F. Relocate traffic signs and appurtenances as Work progresses to maintain effective traffic control.
- G. Owner's Representative may direct Contractor to make adjustments to traffic control signage to eliminate driver confusion and maintain orderly traffic flow during construction at no additional cost to the Owner.
- H. The Contractor shall maintain local driveway access to residential and commercial properties adjacent to work areas at all times unless approved. Use all-weather materials approved by Owner's Representative to maintain temporary driveway access to commercial and residential driveways. The Contractor shall also give special consideration to maintain access by constructing temporary driveway pavement for schools, apartment complex, day care facilities, hospitals, clinics, retirement and assisted living facilities. There is no direct pay for this.

3.02 FLAGMEN

- A. The Contractor may use flagmen who are off-duty, regularly employed, uniformed peace officers or certified flagmen at locations approved by the Owner or Owner's Representative.
- B. Use flagmen to control, regulate and direct an even flow and movement of vehicular and pedestrian traffic, for periods of time as may be required to provide for public safety and convenience, where:
 - a. Where multi-lane vehicular traffic must be diverted into single-lane vehicular traffic.
 - b. Where vehicular traffic must change lanes abruptly.
 - c. Where construction equipment either enters or crosses vehicular traffic lanes and walks.
 - d. Where construction equipment may intermittently encroach on vehicular traffic lanes and unprotected walks and crosswalks.
 - e. Where traffic regulation is needed due to rerouting of vehicular traffic around the work site.
 - f. Where construction activities might affect public safety and convenience.
- C. The use of flagmen is for the purpose of assisting in the regulation of traffic flow and movement, and does not in any way relieve the contractor of full responsibility for taking such other steps and provide such other flagmen or personnel as the Contractor may deem necessary to protect the work and the public, and does not in any way relieve the Contractor of his responsibility for any damage for which he would otherwise be liable.

3.03 MAINTENANCE OF EQUIPMENT AND MATERIAL

Designate individual to be responsible for maintenance of traffic handling around construction area. This individual must be accessible at all times to immediately correct any deficiencies in equipment and materials used to handle traffic, such as missing, damaged, or obscured signs, drums, barricades, or pavement markings. Give name, address and telephone number of designated individual to the Owner's Representative.

Make daily inspections of signs, barricades, drums, lamps and temporary pavement markings to verify that these are visible, and in good working order, and in conformance with LaDOT or any other entity. When not in conformance immediately bring equipment and materials into conformance by replacement, repair, cleaning, relocation, and/or realignment.

Keep all equipment and materials, especially signs and pavement markings, clean and free of dust, dirt, grime, oil, mud or debris.

3.04 CONSTRUCTION PARKING CONTROL

- A. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and the Owner's operations.
- B. Monitor parking of construction personnel's vehicles in existing facilities. Maintain vehicular access to and through parking areas.
- C. Prevent parking on or adjacent to access roads or in non-designated areas.

3.05 SUSPENSION OF WORK

- A. The Engineer will have the authority to suspend the work wholly or in part due to the failure of the Contractor to properly notify the entities stated in *SECTION 3 TRAFFIC CONTROLS AND REGULATIONS, PART 1.04 NOTIFICATION REQUIREMENTS*
- B. The Engineer will have the authority to suspend the work wholly or in part due to the failure of the Contractor to the correct conditions unsafe for the workmen or the general public; for failure to carry out provisions of the contract; for failure to carry out orders; for such period as he may deem necessary due to unsuitable weather; for conditions under the control of the Contractor considered unsuitable for the prosecution of the work or for any other condition or reason affecting the public welfare, health and safety. No allowance shall be made to the Contractor for damages sustained or alleged to have been sustained by him on account of such suspension of work. The period of such suspension, to be determined by the Engineer.
- C. If the work is suspended, all materials delivered at the work but not yet placed therein shall be neatly piled so as not to constitute an obstruction or hazard and shall remain the responsibility of the Contractor. Contractor shall have the prerogative to remove materials, tools, etc. to protect same during such time of work suspension.

END OF SECTION 03

SECTION 4 MATERIALS

PART 1 GENERAL

1.01 SECTION INCLUDES

Material requirements

PART 2 MATERIALS

2.01 PIPE AND FITTINGS

The new sewer pipe shall be PVC SDR-26, for pipe sizes of 6" through 15", manufactured in accordance with ASTM D2241 specification (latest edition). For pipe sizes of 18" through 27", the pipe shall with conform to ASTM F-679 Class T-1. All materials shall conform with Sections C and D of the Sewerage and Water Board General Specifications, except where amended by these Special Specifications.

2.02 PIPE BEDDING

All references made within the Contract to clam shells shall be understood to mean clam shells or approved equal. In the event that clam shells are not available, an alternate material shall be Class I Angular Material (1/4" to 1-1/2") ASTM D2321 (latest edition); i.e., coral, slag, cinders, crushed concrete or crushed stone. There will be no additional payment for the alternate material. The Board reserves the right to approve the type of material.

2.03 LUMBER

Lumber shall be No. 2 Common Southern Pine unless substitutes are requested that meet with the approval of the Engineer.

2.04 SELECT BACKFILL

Select backfill shall be an AASHTO classification A-3 and be free of all organics and debris.

2.05 FILTER FABRIC

The filter fabric shall be a non-woven pervious sheet of plastic yarn constructed so that yarns will retain their relative position with respect to each other. Edges of fabric shall be finished to prevent the outer yarn from pulling away from the fabric. The fabric shall conform with the following requirements:

- a. Weight oz/sq. yd. (min.) 3.0 ASTM D1910
- b. EOS (U.S. Sieve) 50+ DOTD TR630
- c. Average Grab Tensile 90 ASTM D168
lbs./in., (min.)
- d. Grab Tensile (any dir.) 75 ASTM D1682
lbs./in., (min.)
- e. Permeability Factor 8.0 DOTD TR631
cm./sec., (min.)

The fabric shall be Amoco - Propex 4545; Celanese Fibers - Mirafi 140N; Hoechst Fibers - Trevira Spunbound S1115.

2.06 SURFACE STONE

Surface stone and sub-base shall be an AASHTO A-1-b material.

2.07 CERTIFICATION

The Engineer may waive the materials testing requirements of the Specifications and accept the Manufacturer's written certification that the materials to be supplied meet those requirements. Material test data may be required as part of the certification.

2.08 TRADE NAMES OR EQUAL

The Contractor must supply any of the materials specified or offer an equivalent. The Engineer shall determine whether the material offered is equivalent to that specified. Adequate time shall be allowed for the Engineer to make this determination. Whenever any particular material, process, or equipment is indicated by patent, proprietary or brand name, or by name of manufacturer, such wording is used for the purpose of facilitating its description and shall be deemed to be followed by the words "or equal". A listing of materials is not intended to be comprehensive, or in order of preference. The Contractor may offer any material, process, or equipment considered to be equivalent to that indicated. Unless otherwise authorized by the Engineer, the substantiation of offers must be submitted within 35 days after award of Contract.

The Contractor shall, at his expense, furnish data concerning items offered by it as equivalent to those specified. The Contractor shall have the material tested as required by the Engineer to determine that the quality, strength, physical, chemical, or other characteristics, including durability, finish, efficiency, dimensions, service, and suitability are such that the item will fulfill its intended function. Test methods shall be subject to the approval of the Engineer. Test results shall be reported promptly to the Engineer, who will evaluate the results and determine if the substitute item is equivalent. The Engineer's findings shall be final. Installation and use of a substitute item shall not be made until approved by the engineer. If a substitute offered by the Contractor is not found to be equal to the specified material, the Contractor shall furnish and install the specified material. The specified Contract completion time shall not be affected by any circumstance developing from the provisions of this subsection.

PART 3 EXECUTION

3.01 QUALITY OF WORK

All materials, parts, and equipment furnished by the Contractor in the Work shall be new, high grade, and free from defects. Quality of work shall be in accordance with the generally accepted standards. Materials and work quality shall be subject to the Engineer's approval. Materials and work quality not conforming to the requirements of the Specifications shall be considered defective and will be subject to rejection. Defective work or material, whether in place or not, shall be removed immediately from the site by the Contractor, at his own expense, when so directed by the Engineer. If the Contractor fails to immediately replace any defective or damaged work or material after written notice, the Engineer may cause such work or materials to be replaced. The replacement expense shall be deducted from any amount to be paid to the Contractor.

3.02 TEST OF MATERIALS

Before incorporation in the Work, the Contractor shall submit samples of all materials, as the Engineer may require, at no cost to the Agency. The Contractor, at its expense, shall deliver the materials for testing to the place and at the time designated by the Engineer. Unless otherwise provided, all initial testing and a reasonable amount of retesting shall be performed under the direction of the Engineer, and at no expense to the Contractor. The Contractor shall notify the Engineer in writing, at least 15 days in advance, of his intention to use materials for tests specified, to allow sufficient time to perform the tests. The notice shall name the proposed supplier and source of material. If the notice of intent to use is sent before the materials are available for testing or inspection, or is sent so far in advance that the materials on hand at the time will not last but will be replaced by a new lot prior to use on the Work, it will be the Contractor's responsibility to re-notify the Engineer when samples which are representative may be obtained.

3.03 SUBMITTALS

Submittals on all products used on the job will be required before the initial work order is issued.

END OF SECTION 4

SECTION 5 ORDERING OF WORK

PART 1 GENERAL

1.01 CONTRACTOR'S NOTIFICATION

Approximately 90 days after the bid opening and as the Sewerage and Water Board has the need to repair sewer mains, the Contractor will be notified in writing to proceed with the work on the sewer in the form of a "Batch Work Order".

1.02 NOTIFICATION TO THE DEPARTMENT OF PUBLIC WORKS

The Contractor must complete the Department of Public Works Maintenance Department Forms SD600-ML and SD500-ML describing where the Contractor will work that day. The Contractor will be responsible for delivering this information to the Department of Public Works Maintenance Yard, 838 S. Genois on a daily basis. There is no direct pay for this requirement.

1.03 NOTIFICATION TO RESIDENTS AND BUSINESSES

The Contractor shall notify all residents and businesses directly affected by the work, in writing, as to the nature of the work to be done, no less than forty eight (48) hours prior to the commencement of mobilization, unless directed otherwise by the Engineer.

1.04 NOTIFICATION TO INSPECTORS

Prior to commencing work at the authorized job site(s), the Contractor must notify the Sewerage and Water Board's Technical Services Department (942-3876), 48 hours before beginning work to arrange inspection services. The Contractor must e-mail a list of the work sites that will be worked that day. This information must be sent in the morning before 7:30 AM every day that work continues at any site. This form shall state the work order number, site location and the nature of the work performed, i.e., pipe repair or pavement restoration.

1.05 STIPULATIONS OF A "BATCH WORK ORDER"

The Contractor must inspect work sites within five (5) consecutive calendar days after the date of the "Batch Work Order". If more than one work location is given on the "Batch Work Order", the Contractor must work on the jobs in the order given, from the first to the last or as directed by the Engineer, or all at once.

If the Contractor cannot work on all jobs on a "Batch Work Order" at once, the Contractor must, within five (5) consecutive calendar days of the "Batch Work Order" date, inspect all locations given on the "Batch Work Order" and fill and/or barricade all depressions on the surface to prevent accidents. If the Board's barricades are present, the Contractor is to replace them with his own. The Contractor must notify the Sewerage and Water Board's Emergency Phone Center (942-3833) of the location of the Board's barricades and of the need to have someone from the Board remove the Board's barricades from the site. Also, within five (5) consecutive calendar days of the "Batch Work Order" date, and if ordered by the Engineer, the Contractor must set up a sewer bypass system and install the required traffic control devices to guide motorists around the sewer bypass system. This will be in accordance with a traffic plan approved by the City of New Orleans Traffic Department. A sewer bypass will be ordered if the sewer level is up to the top of the largest size sewer main in the upstream sewer manhole, or if a sewer overflow is imminent.

The responsibility of maintaining the work site once the "Batch Work Order" is issued requires the Contractor to accept all liability associated with sewer fluid levels, roadway conditions, job site safety, and any other risk associated with the faulty sewer line which is to be repaired.

PART 2 MATERIALS

2.01 INVENTORY AND TRAFFIC PLAN

The Contractor is required to have all materials and equipment on hand before closing the roadway. The Contractor must submit a traffic plan to the City of New Orleans Department of Public Works and obtain their approval of the traffic plan prior to closing the roadway. A copy of the approved traffic plan shall be submitted to the Engineer upon request (*see SECTION 3 TRAFFIC CONTROL AND REGULATION*)

PART 3 EXECUTION

3.01 WORK PROGRESS

Work must continue (with the exceptions of nights, holidays and weekends) at a site until the sewer main is repaired, backfilling is completed, the pavement or other surface type is restored and the final acceptance is attained. Contractor will be required to provide sufficient staff to complete the quantity of work as specified in the proposal section within a one year time period. The Contractor is allowed to work at multiple locations simultaneously provided that the work progress is continuous at all open work sites

The contractor shall complete all phases of each point repair on the “Batch Work Order”, including but not limited to pipe work, backfill, and pavement restoration, within a maximum of fifteen (15) working days from the date of the beginning of excavation for that particular repair.

Failure to start within five (5) days or within twenty-four (24) hours (See Section 4-4) or failure of the contractor to complete all phases of each repair on the “Batch Work Order”, including but not limited to pipe work, backfill, and pavement restoration, within a maximum of fifteen (15) working days from the date of the beginning of excavation for that particular repair will result in liquidated damages as indicated in Section 2-9 of the special specifications. The Engineer will consider any extenuating circumstances when evaluating the Contractor’s response and completion times.

3.02 EMERGENCY WORK

In cases of emergencies the Contractor will be required to mobilize and begin repairs within 24 hours when requested by the Engineer. There is no direct pay for this requirement.

3.03 COORDINATION WITH PUMPING STATIONS

The Contractor shall be required to notify the Sewerage and Water Board’s Operations Department (942-2960) to coordinate the pumping station operation with the work so as to lower the fluid level at the work site. The Contractor must notify sewer operations at least one (1) working day in advance of scheduled work.

3.04 INSPECTION OF WORKSITE

The Contractor MUST perform an inspection of the work area prior to the arrival of his equipment. Existing damage to sidewalks, driveways, and other structures should be documented. The condition of all plant life in this area should also be documented. **THE CONTRACTOR SHALL TAKE IDENTIFIABLE PICTURES OF ALL DEFECTS IN THE VICINITY OF THE JOBSITE BEFORE THE COMMENCEMENT OF WORK.** The use of a video camera to record all conditions is recommended. The Contractor is urged to be very thorough with his accumulation of photographs and their documentation. Authenticity of claims by area residents will be judged based upon this information. Photographs of the pre-existing conditions will be made available to the Engineer at his request. There is no direct pay for this requirement.

3.05 COMMUNICATION

The Contractor’s representative supervising their field operations is required to carry a cellular telephone during normal working hours. All costs for the telephone and communications between the Engineer and the Contractor’s representative will be paid for by the Contractor.

3.06 UTILITIES

A. COORDINATION WITH OTHER AGENCIES

The Contractor shall notify all public and private utilities immediately in order to have their facilities located and/or marked at the site. The Contractor will be required to coordinate his operations with the Electric and Technical Services Departments of the Sewerage and Water Board, Entergy Gas and Electric, South Central Bell, Cox Cable, and all other affected public or private agencies. The Contractor shall exercise caution in making excavations to avoid damage to all existing facilities and he will be held responsible for damage to any and all facilities and to the private property of others. Any work started and then abandoned due to conflicts encountered with utilities will be restored at the Contractor's expense if the Contractor began the work prior to having all the utilities in the area marked.

B. LIST OF HOUSE CONNECTIONS

If requested by the Contractor, a list of the locations of existing water taps at the main and of sewer house connections can be furnished by the Sewerage and Water Board House Connection Department. However, it shall be the responsibility of the Contractor to obtain this information from that department and to verify these locations at the job site. The Contractor is required to use an underground pipeline locator to locate water services. When excavating, the Contractor shall not cut the water services or any other crossing utility to provide access for a trench box or for convenience, but shall drive sheeting on the sides of the service or utility, at no cost to the Board. If a water service or main is broken, the Contractor will not be allowed to repair it and must notify the Sewerage and Water Board's Emergency Phone Center (942-3833) of the location and nature of the break, and request that a Sewerage and Water Board repair crew make the repair, unless otherwise directed by the Engineer. The Contractor must use equipment or materials to deflect jetting water and minimize the hazard and inconvenience to the public until a Board crew arrives at the site, at no cost to the Board. The Contractor will be charged for the repair on a force account basis. The cost of the repair will be deducted from amounts due or to become due the Contractor. The Sewerage and Water Board shall not be held liable for any expenses or damages occurring while the Contractor is waiting for the Board to repair the broken water line. The existing sewer house connection locations and water tap locations submitted to the Contractor will be taken from Sewerage and Water Board records and could vary from the actual locations.

3.07 CASSWORKS LOGS

The Contractor is required to fill out daily CASSWORKS logs for the Sewerage and Water Board records. These logs will be provided by the Engineer and the Contractor's comments should describe the work performed at the work sites. These logs should include information as to the type of work, who it was performed by, location of work performed, date of work, and time of arrival and departure. It shall be the responsibility of the Contractor to deliver these logs on a weekly basis to the Technical Services Office of the Sewerage and Water Board, 2900 Peoples Ave. The Engineer has the right to add or delete required information to the form at no additional charge. There is no direct pay for this requirement.

END OF SECTION 5

SECTION 6
RESTORATION OF SEWER MAIN BY POINT REPAIR

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Repairs to existing sewer lines by replacing lengths of failed pipe.
- B. Replacement of segments of the existing sanitary sewer system, including collection lines, service lines, and service connections, as indicated on the Contract Drawings or Proposal Form. The pipe used for replacements and point repair shall be as specified below.
- C. Replacement of manhole connections where required as specified herein.

1.02 SUBMITTALS

- A. Submittals shall conform to requirements of all sections and provisions of these specifications.
- B. The Contractor shall furnish a certificate from the pipe manufacturer indicating that the pipe and jointing material meets all applicable requirements of these specifications.
- C. The Contractor shall provide the Engineer with the Geospatial Information location of each clean-out cap, manhole, sewer house connection wye or any other appurtenance installed or replaced. These submittals shall be in accordance with *SECTION 13 GEOSPATIAL INFORMATION SYSTEMS*.

1.03 MEASUREMENT AND PAYMENT SEWER POINT REPAIR & BEYOND POINT REPAIR

- A. Measurement: Measurement shall be on a per each for the first 12 feet of pipe and linear foot basis thereafter for each foot in excess of the initial 12 feet, measured to the nearest whole foot of sanitary sewer line. Measurement will be made from the connecting point at the upstream location to the connecting point at the downstream location. Measurement of the sewer line depth shall be the invert of the sewer line at the center of the point repair. This item includes the replacement of all service connections to the mainline (including wyes, tees and any other fittings and appurtenances necessary)
- B. Measurement for extra length repair is on a linear foot basis for each material type and diameter in excess of the 12 foot replacement length.
- C. Payment: Payment shall be made at the unit price bid per linear foot of sanitary sewer point repair in, in accordance with the Specifications contained herein. This price and payment shall be full compensation for all material including fitting, labor, equipment, watertight connections, removal of existing pavement, excavation, bedding, backfill, traffic control and devices, disposal of excess excavation material, and any other related or incidental items required to complete this item of work for which separate payment is not provided for under other items in the Proposal Form. Sewage Flow Control and Diversion Pumping shall be paid via a separate pay item.

1.04 MEASUREMENT AND PAYMENT OF 6" SERVICE LATERALS/ HOUSE CONNECTIONS

- A. Measurement: Measurement shall be on a per linear foot basis, measured to the nearest whole foot on sanitary sewer service lateral lines. Measurement will be made from the connecting point at the wye, tee, or saddle to the property line or re-connection point identified by the engineer.
- B. Payment: Payment shall be made at the unit price bid per linear foot of sanitary sewer service lateral lines replaced in accordance with these Specifications contained herein. The service lateral lines shall be replaced from the connection point at the wye, tee or saddle to the property line or re-connection point identified by the Engineer. This price and payment shall be full compensation for all material, labor, equipment, watertight connections, removal of existing pavement, excavation, bedding, backfill, traffic control and devices, disposal of excess excavation material, and any other related or incidental items required to complete this item of work for which separate payment is not provided for under other items in the Proposal Form.

1.05 MEASUREMENT AND PAYMENT OF ABANDONMENT OF POINT REPAIR

If point repair is abandoned, payment will be made on a cubic yard basis for excavation required to expose existing pipe.

1.06 PERFORMANCE REQUIREMENTS

- A. Owner's Representative may identify potential locations for point repair, but the Contractor is responsible for verifying locations.
- B. Owner's Representative will authorize each point repair after failed points are located. Do not make point repairs without prior approval of Owner Representative.
- C. Replace carrier pipe for all point repairs unless otherwise directed by the Owner's Representative.
- D. Minimum length of pipe to be replaced shall be determined by the Owner's Representative.

PART 2.0 MATERIALS

Materials for point repairs, other than those specified, may be considered for use in rehabilitation of existing sewers. For consideration of other materials, submit complete manufacturer's data including material, sizes, flow carrying capacity, installation procedures and history of similar installations to Owner Representative for evaluation

2.01 POLYVINYL CHLORIDE (PVC) PIPE

- A. Polyvinyl chloride (PVC) gravity sewer pipe and fittings 5-in. through 15-in. diameter shall conform to ASTM D3034 - Standard Specifications for Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings, SDR 26. Full body SDR 35 fittings shall be used for all connections.
- B. Polyvinyl chloride (PVC) gravity sewer pipe and fittings 18-in. through 36-in. diameter shall conform to ASTM F679 - Standard Specification for Polyvinyl Chloride (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings.
- C. The supplier shall be responsible for the performance of all inspection and testing requirements specified in ASTM D3034 - Standard Specifications for Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings or ASTM F679 - Standard Specification for PolyVinyl Chloride (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings, as applicable. Complete records of inspections, examinations and tests shall be kept and submitted to the Board. The Board reserves the right to perform any of the inspections set forth in the Specification where such inspections are deemed necessary to assure that material and services conform to the prescribed requirements.
- D. Pipe shall be furnished in standard laying lengths not exceeding 20 feet.
- E. The minimum pipe stiffness at 5% deflection shall be 46 psi for all sizes when tested in accordance with ASTM D2412 - External Loading Properties of PVC Pipe by Parallel Plate Loading. There shall be no evidence of splitting, crackling, or breaking when the pipe is tested as per ASTM D2412 specifications.
- F. The Contractor shall furnish a certificate from the pipe manufacturer indicating that the pipe meets all applicable requirements of these specifications.

2.02 JOINTING MATERIAL

- A. New pipe shall be joined with an integral bell and spigot-type rubber gasketed joints conforming to ASTM D3212 - Standard Specifications for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals. Joints shall permit contraction, expansion and settlement, and yet maintain a watertight connection.
- B. Connections between existing and new pipe shall be jointed with rigid non-shear couplings as specified herein.
- C. All fittings and accessories shall be furnished by the pipe supplier and shall have bell and/or spigot compatible with the pipe, and be from a single manufacturer.
- D. Unless otherwise specified or noted on the Drawings, tees, cleanouts, and stoppers or plugs shall be the same material used to repair the main sewer and have an inside diameter of the same size as the existing line, except that it shall in no case have a diameter smaller than 6-inches. The plug and installation shall be able to withstand all test pressures involved without leakage.

PART 3.0 EXECUTION

3.01 PROTECTION

- A. The Contractor shall locate all existing underground utilities before beginning excavation of sewer mainlines, service connections and service laterals as shown in the Drawings. The Contractor is solely responsible for utility location, verification and relocation when required. Carefully protect all existing sewers, water lines, gas lines, electrical lines, tele-communication lines, sidewalks, curbs, gutters, pavements, or other utilities or structures in the vicinity of the work from damage at all times. Where it is necessary for the proper accomplishment of the work to repair, move, and/or replace any such utility or structure, do so in accordance with the provisions set forth in the General Specifications and Special Specifications contained herein.
- B. The Contractor is solely responsible for locating, location verification and scheduling any relocation of all utilities. Where service connections or lines from water or gas mains or sewers to the user's premises are disconnected, broken, damaged, or otherwise rendered inoperative by the Contractor for any reason, the Contractor shall, at Contractor's own expense, arrange with the respective utility company for any repairs of lines under their jurisdiction, or for any lines not within their jurisdiction; the Contractor shall repair or replace same and restore service to the premises. Any such work to be done at the Contractor's expense shall be considered incidental to the construction of the sewers and no additional payment will be allowed thereof.
- C. Provide barricades, plates, warning lights and signs as required for public safety for excavations created by point repairs. Sufficient barriers and other traffic control methods shall be in place prior to start of construction, the contractor shall submit to the City Traffic Engineer for review and approval a complete construction signage, traffic maintenance and public safety plan per section C129 of the General Specifications of Department of Public Works around the excavation at all times as specified by DPW Traffic Regulation.
- D. All flow control required for the Work is the responsibility of the Contractor as per *SECTION 08 - SEWER FLOW CONTROL*. Flow shall not be diverted to outside of the sanitary sewerage system.
- E. Do not allow sand, debris or runoff to enter sewer system.

3.02 EXCAVATION

- A. Excavate trenches in accordance with *SECTION 11 TRENCHING, BACKFILLING, AND COMPACTION*.
- B. Perform work in accordance with OSHA standards. Employ a Trench Safety System as specified for excavations over 5 feet deep.
- C. Install and operate necessary dewatering and surface water control measures in accordance with requirements of *SECTION 08 SEWER FLOW CONTROL*.

3.03 DIVERSION PUMPING

- A. Install and operate diversion pumping equipment to maintain sewage flow and to prevent backup or overflow. Obtain approval for diversion pumping equipment and procedures from Owner Representative. The contractor is responsible for diversion as specified in *SECTION 08 SEWER FLOW CONTROL*.
- B. In the event of accidental spill or overflow, immediately stop the overflow and take action to clean up and disinfect spillage. Promptly notify Owner's Representative so that required documentation can be made. Promptly notify Owner's on-call Environmental Services Department at (504) 232-2278.

3.04 TYPICAL SEQUENCE OF POINT REPAIR

- A. Survey area to verify the location of point repair.
- B. The Contractor shall locate all existing underground utilities before beginning excavation of sewer mainlines, service connections and service laterals as shown in the Drawings.
- C. Excavate to the minimum length of existing pipe to be repaired where isolated line failure has occurred due to conditions such as but not limited to; settlement, corrosion, crushing, cracked pipe, broken pipe, faulty tap, protruding tap, sheared joint, dropped joint, or other similar conditions. All necessary material will be furnished and installed by the Contractor to ensure proper sewer services after work is completed.
- D. Care shall be exercised during initial excavation of the defective pipe or fittings so as not to disturb the existing pipe and fittings to remain. After the defective pipe has been exposed, the Engineer's resident inspector shall authorize additional pipe to be uncovered as is necessary to allow space for the installation of the new pipe.
- E. Prior to replacing pipe, determine condition of the existing line on both sides of point repair by lamping the line a minimum of 10 feet in each direction. Determine whether additional lengths of line beyond "minimum length"

criteria, need replacement. Report need for additional replacement to Owner Representative and obtain approval before proceeding.

- F. The defective pipe shall be cut out in such a way that the ends remaining are straight, smooth and free of chips or cracks. The defective pipe shall be removed from the trench and disposed of by the Contractor.
- G. Establish proper grade for the pipe being replaced using methods acceptable to Owner Representative. The replacement sewer mains and house connections shall be installed at the existing elevations and locations indicated unless changed by the Engineer.
- H. The Contractor shall schedule the work so that the sewer mains and house connections between two manholes are completed before moving to another location.
- I. No main or lines shall be left open overnight; a temporary tie-in shall be made between the end of the new main and the existing, and plugs at manholes shall be removed so as to allow flow to continue until work is resumed.
- J. Lay no pipe except in the presence of an inspector representing the Engineer.
- K. Before placing sewer pipe in position in the trench, carefully prepare the bottom and side of the trench, and install any necessary bracing and sheeting as shown on the Sewerage and Water Board of New Orleans Standard Drawings and *SECTION 11 - TRENCHING, BACKFILLING, AND COMPACTION*.
- L. Bedding and foundations shall conform to the Drawings. Maximum trench width and standard sheeting and bracing shall comply with *SEWERAGE AND WATER BOARD OF NEW ORLEANS STANDARD DRAWING NUMBER 4697-E5A*. Foundation lumber shall only be placed in locations where existing lumber is removed by the Contractor during excavation. If no foundation lumber is removed, the Contractor shall not place any new lumber.
- M. Do not allow water to run or stand in the trench while pipe laying is in progress or before the trench has been backfilled. Do not at any time open up more trench than available pumping facilities are able to dewater.
- N. Carefully inspect each piece or pipe and special fitting before it is placed, and lay no defective pipe in the trench. The laying of new pipe in finished trenches shall begin at the lowest point, with the spigot ends pointing in the direction of flow. Extreme care shall be exercised to keep pipe in exact alignment and elevation. The interior of the pipe and the jointing seal shall be free from sand, dirt, and trash before installing in the line. Extreme care must be taken to keep the bells of the pipe free from dirt and rocks so joints may be properly assembled without over stressing the bells. The jointing of the pipe shall be done in strict accordance with the pipe manufacturer's instructions and shall be done entirely in the trench.
- O. Embedment of pipe shall conform to the details in the Standard Drawings and *Section 11 – Trenching, Backfilling, and Compaction*. Bell holes shall be excavated so that after installation only the pipe barrel shall bear upon the trench bottom. Proper selection and placement of bedding and backfill materials are necessary to minimize deflection of the pipe diameter. No blocking under the pipe will be permitted. Pipe laying shall not precede backfilling by more than 100 feet without approval by the Engineer.
- P. Pipe laying shall proceed upgrade, starting at the lower end of the grade and with the bells upgrade. When pipe laying is not in progress, keep the ends of the pipe tightly closed with a temporary plug approved by the Engineer.
- Q. Bell holes shall be large enough to allow ample room for pipe joints to be properly made. Cut out bell holes not more than 2 joints ahead of pipe laying. Carefully grade the bottom of the trench between bell holes so that each pipe barrel will rest on a solid foundation for its entire length. Lay each pipe joint to form a close concentric joint with adjoining pipe and so as to avoid sudden offsets or inequalities in the flow line.
- R. Wherever replacement pipe materials are joined, cut the replacement pipe to a length $\frac{1}{2}$ " less than the overall length of the section being replaced. Then place the pipe in the trench, thoroughly clean the ends of existing and replacement pipe, and install repair couplings as specified below. After installation, check the work to ensure that the replacement pipe is vertically and horizontally aligned with the existing pipe and that the elastomeric couplings and stainless steel shear ring are tight and evenly fitted.
- S. Each time the work on the sewer is halted for more than one (1) hour, the ends of the pipe shall be sealed to prevent foreign material from entering the pipe. As the work progresses, thoroughly clean the interior of the pipe in place. After each line of pipe has been laid, carefully inspect and remove all earth, trash, rags, and other foreign matter from the interior.
- T. After the joints have been completed, they shall be inspected before they are covered. The pipe shall meet the test requirements for water tightness; immediately repair any leak or defect discovered at any time after the

completion of the work. Take up any pipe that has been disturbed after joints were formed, clean and remake the joints, and relay the pipe; this shall be done at the Contractor's expense. Carefully protect all pipe in place from damage until backfill operations have been completed.

- U. Service laterals are to be replaced to the property line any time a wye or tee connection is replaced, or as directed by the Engineer. Do not begin the backfilling of trenches until the pipe in place has been inspected and approved by the Engineer.
- V. After completion of point repair, but prior to backfill, SWBNO retains the right to perform a smoke test. The Contractor shall repair and retest sections that fail. The owner shall bear no costs to for repairs made for failed test
- W. Backfill the excavation as specified in *SECTION 11 - TRENCHING, BACKFILLING, AND COMPACTION*.
- X. Point repairs that have offset joints, non-uniform grade or alignment, or other unsatisfactory conditions, shall be rejected. The Contractor shall replace pipe and bedding as required when work is rejected at their own expense.

3.05 DELIVERY, STORAGE AND HANDLING

- A. Care shall be taken in shipping, handling and laying to avoid damaging the pipe and fittings. Extra care will be necessary during cold weather construction. Any pipe damaged in shipment shall be replaced as directed by the Engineer.
- B. Any pipe or fitting showing a crack or which has received a blow that may have caused an incipient fracture, even though no such fracture can be seen, shall be marked as rejected and removed at once from the site.
- C. While stored, pipe shall be adequately supported from below at not more than 3-ft intervals to prevent deformation. Pipe shall not be stacked higher than 6-ft. Pipe and fittings shall be stored in a manner which will keep them at ambient outdoor temperatures. Temporary shading as required for stored PVC pipe shall be provided by the Contractor at no expense to the Board. Simple covering of the pipe and fittings which allows temperature buildup when exposed to direct sunlight will not be permitted.

3.06 LAYING POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS

- A. Polyvinyl chloride (PVC) gravity sewer pipe shall be laid in accordance with the instructions of the manufacturer and as specified herein. No single piece of pipe shall be laid unless it is straight. The centerline of the pipe shall not deviate from a straight line drawn between the centers of the openings at the ends of the pipe by more than 1/16-in per foot of length. If a piece of pipe fails to meet this requirement check for straightness, it shall be rejected and removed from the site.
- B. The Contractor shall use care in handling and installing pipe and fittings. Storage of pipe on the job site shall be done in accordance with the pipe manufacturer's recommendation and with approval of the Engineer. Under no circumstances shall pipe or fittings be dropped either into the trench or during unloading. The interior of the pipe shall be kept clean of oil, dirt and foreign matter, and the machined ends and couplings shall be wiped clean immediately prior to joining.
- C. The Contractor shall use a PVC pipe cutter where necessary to cut and machine all PVC pipe in the field. A "full insertion mark" shall be provided on each field cut pipe end. Field-cut pipe shall be beveled with a beveling tool made especially for plastic pipe.
- D. Each length of pipe and each fitting shall be marked with the nominal size, the SDR designation, the name of the manufacturer or his trademark, and the date of manufacture.
- E. Rubber gaskets, if shipped separately from the pipe, shall be marked with manufacturer's identification sizes and proper insertion direction.
- F. When dissimilar pipe materials are joined, use reinforced compression couplings with a full-length stainless steel shear ring. Couplings shall be Mission Adjustable Repair Couplings or approved equal. The couplings shall be appropriately sized. The rubber portion of the couplings shall meet the requirements of ASTM C425 – Standard Specification for Compression Joints Vitrified Clay Pipe Fittings and ASTM C1173 – Standard Specification for Flexible Transition Couplings For Underground Piping Systems. The bands for attaching the couplings to pipes shall be 316 series stainless steel and conform to ASTM A240 – Standard Specifications for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels and for General Applications. The shear ring shall be 300 series stainless steel and conform to ASTM A240 – Standard Specifications for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels and for General Applications.

- G. If any defective pipe is discovered after it has been installed, it shall be removed and replaced with a sound pipe in a satisfactory manner at no additional cost to the Board.

3.07 CLEANING

Before being laid in place, each section of pipe and fitting shall be thoroughly cleaned. If the entire lengths of pipe between one or more manholes are replaced, then at the conclusion of the work, the Contractor shall thoroughly clean the entire pipe by flushing with water or other means to remove all dirt, stones, pieces of wood, or other material which may have entered during the construction period. Debris cleaned from the lines shall be removed from the lowest outlet. If, after this outlet cleaning, obstructions remain, they shall be removed.

3.08 SEWER HOUSE CONNECTIONS

- A. Sewer house service connections shall be six inch pipe extended from the main to the property line. The use of saddles to connect the house service to the main will not be permitted unless the pipe has been previously lined; all connections will be made using full bodied wye or tee fittings
- B. The Contractor shall not damage the existing lined pipe when removing the original pipe from around the liner.
- C. The Engineer has identified potential locations for repairs. The Contractor is responsible for verifying locations in reference to the main line (distance from the upstream and downstream manholes). Service line point repairs are performed only on those portions of service lines which are located in an easement or right-of-way; no repairs to service lines shall be performed on private property.
- D. The Contractor shall ensure that wastewater does not back-up into private property. The Contractor shall establish a plan to prevent sewer back-ups when reconnections are not accomplished in a timely manner.
- E. The Contractor shall complete re-connection of all service lines within 24 hours.
- F. The Contractor shall inspect the service line at the repair location to determine that all pipes requiring replacement within 10 feet of the repair has been replaced before reconnecting the service line and backfill operations begin.
- G. Service connections shall be installed at a minimum slope of 2 percent or as approved by the Engineer. The limits of the service connections shall be determined or verified by the Engineer in the field.

3.09 MANHOLE CONNECTIONS

- A. Where it is necessary to connect the sewers to existing manholes, the existing short bell pieces remaining in the wall of the manhole shall be broken out and new short bell pieces inserted to the full thickness of the walls and permanently grouted, as shown on the Drawings (*see SWB Dwg. No. 6312-E-5*). The annular space between the pipe and the wall of the structure shall be grouted with a type three, high early strength cement, or quick setting EMBECO or approved equal.
- B. If a PVC pipe is to be connected to a manhole or other concrete brick structure, 3M CR202 elastomeric grout and jute or approved equal shall be used in place of the cement grout. As an alternative, the Contractor may use a sand-impregnated PVC stub, grouted with cement grout as specified above, for the manhole connection. There shall be no direct pay for connecting the new sewer main to an existing manhole.
- C. Place a manhole adapter supplied by Fernco or approved equal on the pipe before mortaring around the pipe. Shape or reshape the bottom of the manholes as necessary to fit the invert of the pipe in the manner specified elsewhere.

END OF SECTION 06

SECTION 7

REPLACEMENT OF SEWER MAINS FROM MANHOLE TO MANHOLE

PART 1.0 GENERAL

The Contractor shall furnish all labor, materials, equipment and supervision for the replacement, relocation and/or installation of sewer mains between manholes including tie-ins into the existing sewer system. The work shall also consist of installing or replacing service connections, and performing all operations required for improving the sewer system. The Contractor shall provide the necessary dewatering and bypassing required during execution of this work.

The Contractor shall furnish all labor, materials, equipment and supervision required for the replacement of existing sewer mains between manholes including tie-in into the existing system.

All work to be done on Sewerage Systems will be as shown on the plans and as directed by the Director. All workmanship, materials and tests shall conform to Section D, General Specifications of the Sewerage and Water Board, S&WB Standard Drawings, and Sewerage and Water Board Standard Drawing No. 7260-SWD, except as noted hereinafter. The Contractor shall notify the Chief of Engineering of the Sewerage and Water Board in writing not less than three or more than ten working days in advance of starting the job, in order to allow for scheduling the inspection of the work. Failure to do so prior to starting work will result in the Contractor being required to expose the bedding on all pipe previously installed without Sewerage and Water Board inspection.

All workmanship and materials required to perform this work, shall conform to the current General Specifications of the Sewerage and Water Board and the Department of Public Works except as noted hereinafter.

The Contractor performing work covered in this section shall be required to coordinate his operations with the Sewerage and Water Board and other utilities prior to making any excavation. The Contractor shall exercise caution in making excavations to avoid damage to these services and other utilities.

The Contractor will be furnished with a list of the locations of water and sewer house connections from the Sewerage and Water Board. It will be the Contractor's responsibility to verify the location of these so as to avoid damage. Furnishing this information should not be construed as a waiver of the Contractor's liability, but rather an attempt on the part of the Board to minimize the Contractor's hazard. The existing house connections submitted in the lists are from S&WB records and could vary from the actual location. Any damage to the existing water, sewer and drain connections resulting from negligence will be repaired by the S&WB at the expense of the Contractor. The Contractor is also responsible for damage to other utilities and the property of others.

Existing sewer service connections shall be tied into the new mains and replaced with new connections where required.

PART 2.0 MATERIALS

2.01 MATERIALS AND METHODS

Pipe material for sewer mains shall be solid wall polyvinyl chloride (PVC) pipe. The solid wall PVC pipe 6" through 15" shall be manufactured in accordance with ASTM D-3034 specifications for a special gravity sewer pipe dimensions ratio (SDR) of 26. The fittings (tees, wyes, etc.) and bell stock for solid wall PVC pipe shall have a thickness not less than that of the SDR-35 solid wall PVC pipe of the same inside diameter. PVC Sewer Mains sizes 18" through 27" shall be solid wall, PVC pipe conforming to ASTM F-679, Class T-1. PVC pipe shall be type PSM Vinyl Chloride (PVC) standard lengths with integral cast bells and elastomeric gaskets as recommended by the manufacturer and ASTM D-3212. The Sewerage & Water Board reserves the right to approve the type of material.

The maximum allowed deflection for installed PVC sewer pipe is 7.5% reduction in its actual vertical inside diameter not the minimum allowed by the ASTM Specification. Pipe exceeding this allowed deflection at any time prior to acceptance, shall be removed and replaced with new pipe and reinstalled as per the above specifications at the contractor's expense. The S&WB reserves the right to mandrel any and/or the entire PVC pipe installed. The contractor will install the pull lines and pass the mandrel through the mains selected by the S&WB. The S&WB will provide the mandrel for all tests. The mandreling tests will occur after compacted backfill of the trenches. The Contractor shall bear the cost of mandreling retesting if required and will be assessed \$100.00 for each occurrence in each section between manholes. In addition, cleaning and TV/video of the new PVC sewer lines (either in service or not) will occur during final inspection after all paving is completed to verify the absence of construction debris. The Contractor shall bear all costs of cleaning and TV/video test or retesting. It is required that a S&WB representative and the Contractor witness the actual mandreling test(s) and witness the real-time cleaning and TV/video test(s). The S&WB does not desire a copy of the videotape. (No Direct Payment)

Bedding and foundation for mains shall conform to latest S&WB Drawing No. 4697-E5A except as noted below. Backfill and drainage fabric for mains shall be as noted below. Standard sheeting and bracing for the sewer pipe shall comply with latest DWG. 4697-E5A and with the S&WB General Specifications. The same type and size pipe material must be installed between manholes.

PART 3.0 EXECUTION

3.01 INSTALLATION

Installation of the solid wall PVC pipe shall conform to Section D Sewerage and Water Board General Specifications, "The Construction of Sewer" and the Plastic Pipe Association Specification UNI-B 78, "Recommended Practice for the Installation of Polyvinyl Chloride (PVC) Sewer Pipe." The trench bottom shall be relatively smooth and free from rocks, roots, etc. After the sheeting and/or foundation lumber is placed, the pipe shall be laid on a smooth bed of approved bedding material mentioned below, compacted to a density of not less than 95% relative density, six inches deep for the full width of the trench.

The bedding material shall be extended to six inches above the top of the pipe, well compacted (hand or mechanical) in six inch layers to not less than 95% relative density, as shown on the Standard Plans of the Department of Public Works. The bedding material shall be placed and consolidated under the pipe haunches to provide maximum side support to the pipe while avoiding displacement and misalignment of the pipe.

Bedding material shall Class 1A Angular Material (1/4" to 1-1/2") conforming to ASTM D2321, i.e., crushed concrete or crushed stone. The Sewerage and Water Board reserves the right to approve or disapprove the type of bedding material.

Backfill material shall be pumped sand and shall be placed at or near optimum moisture content and compacted. Backfill material shall be placed in layers not to exceed 12 inches. Each layer shall be compacted to a minimum of 95% of maximum density using approved mechanical compaction equipment. The above backfill material and the compaction procedures shall be applied also for any service connections, and point repairs.

Drainage fabric shall be installed according to the following specifications and according to the plan details. Drainage fabric shall be nonwoven pervious sheets of plastic yarn, constructed so that yarns will retain their relative position with respect to each other. Edges of fabric shall be finished to prevent the outer yarn from pulling away from the fabric.

The fabric shall be installed as follows:

After the trench is excavated, the foundation lumber shall be placed in the bottom of the trench as required. The filter fabric shall be cut to the needed width including allowances for "loose" placement in the trench and a double-top overlap on top of the bedding material after placement. The fabric shall be laid over the foundation lumber in the trench along its alignment with an 18" minimum overlap at the ends of subsequent lengths. Care should be taken to place the fabric tightly against the soil so that no voids occur behind the fabric. Also, wrinkles or folds should be avoided. The sides of the fabric that will be used as a double-top overlap should temporarily be pinned to the sides of the trench.

After installing the fabric, an initial 6" layer of bedding material shall be placed and compacted to the proper grade before placing the sewer pipe. The remainder of the bedding material shall then be placed around and above the pipe and compacted. Compaction is required to seat the fabric and bedding material against the trench wall and to reduce settlement.

After compaction, the two edges of the filter fabric shall be unfastened and overlapped on top of the bedding material. The backfill material shall then be placed and compacted as required.

Drainage fabric shall conform to section ASTM D1910. The Contractor shall provide the Engineer with a sample of the fabric to be used on the project along with a copy of the manufacturer's minimum requirement specifications prior to the start of construction. Drainage fabric shall be installed around the bedding and under the sand backfill according to the Standard plans.

3.02 INSTALLATION/REPLACEMENT OF NEW SEWER MAINS

The contractor shall furnish all materials, equipment and labor to remove the existing deteriorated main, (if any) install mains and fittings (wyes, tees, etc.), including appurtenances such as tie-ins, to existing system, lumber foundation, bedding, backfilling, necessary dewatering and bypassing up to a 3-inch pump, during the execution of this work.

Where the sewer main is relocated, the existing abandoned main must be filled and plugged where shown on the plans. The abandoned sewer line shall be filled with sand, by flooding the pipe to avoid caving in of the sewer line.

All workmanship, materials and tests shall conform to Section D General Specifications of the S&WB, except as noted otherwise. The Contractor may use more than one crew in performing work in various sections of a system at a given time, provided he has the approval of the Engineer.

The new sewer mains and service connections shall be installed at the elevations and locations indicated on the plans, unless changed by the Engineer. The Contractor shall schedule his work so that the sewer mains and service connections between two manholes are completed before moving to another location (this will minimize the spillage of raw sewage into an open trench). The Contractor shall isolate the block where the work is in progress by plugging the upstream and downstream manholes. Should the sewage build up to within three feet of the upstream manhole, or if directed by the Engineer, the Contractor shall pump the liquid to the downstream manhole through bypass piping. No mains or lines shall be left open overnight; a temporary tie-in shall be made between the end of the new main and the existing, and plugs at manholes shall be removed so as to allow flow to continue until work is resumed.

Where it is necessary to connect the sewers to existing manholes, the existing short bell pieces remaining in the wall of the manhole shall be broken out. A new short bell piece shall be inserted to the full thickness of the walls and permanently grouted in place (see latest S&WB Dwg. 6178-B-6). The new short bell piece shall be a sand impregnated PVC stub, grouted with a type three, high early strength cement, or quick setting EMBECO or similar material.

If a PVC pipe is to be connected to a manhole or other concrete or brick structure, the Contractor shall use a sand impregnated PVC stub, grouted with cement grout as specified above, for the manhole connection.

The Contractor is required to have all materials and equipment on hand prior to the start of excavation so that there will be a minimum of inconvenience to the residents. All trenches must be backfilled at the end of the day.

3.03 SEWER SERVICE CONNECTIONS

New or replacement sewer service connections, where required, shall be six (6") inch pipe extended from the main to the property line or to a point directed by the Director. Bedding and foundations required under sewer mains are not required under six (6") inch sewer house connections, but 6" of compacted pumped sand is

required as bedding under 6" sewer service connections. Backfill is required the same as described herein for sewer mains.

The use of saddles to connect the house service to the main will not be permitted; all such connections shall be made using wye or tee fittings except on lined sewer mains.

All existing sewer service connections connected to sewer lines that are being replaced shall be removed and replaced from the new sewer line to property line and tied to the existing service at that point.

The need for replacing existing sewer service connections that are connected to existing sewer lines that are not being replaced shall be as directed by the Engineer after field inspection or as indicated on the Drawings. These services will be removed and replaced from the existing sewer line to property line and tied to the existing service at that point.

New sewer service connections shall be installed from an existing, new, or removed and replaced" sewer main to property line at locations where no service presently exists as directed by the Engineer or as indicated on the Drawings.

All pipe and fittings shall be of the same material as the main, unless approved by the S&WB. The connection of any two dissimilar materials shall be accomplished by the installation of a "No-Hub" coupling, consisting of a neoprene sleeve and bushing adaptor and two stainless steel bands with stainless steel screws. The coupling shall be manufactured in strict accordance with Cast Iron Soil Pipe Institute Specifications C-301, latest revision, as manufactured by Tyler Pipe Company, Mission Clay Products Corps., Fernco, or approved equal.

Where existing or proposed subsurface facilities conflict with existing sewer house connections, these same connections shall be adjusted to provide for adequate clearance in accordance with the S&WB Standard Specifications. No siphons will be permitted. Adjustment of sewer house connections shall comply with the above specifications for replacement of sewer house connections.

3.04 SANITARY SEWER MANHOLE

New sanitary sewer manholes required when installing new sewer mains or relocating existing sewer mains shall be constructed in accordance with the applicable sections of the S&WB General Specifications and latest S&WB Standard Drawings No. 6178-B-6 and No. 6178-B-6A

To abandon existing sewer manholes, the Contractor shall remove the casting and cover, remove the manhole wall three (3) foot depth, plug all pipes, and fill the remainder of the manhole with pumped sand, compacted to 95% maximum density. There will be no direct pay for abandoning sewer manholes. Removed casting and cover shall be returned to S&WB Central Yard.

3.05 INSPECTION

At the completion of the installation of the sewer mains between manholes, and prior to final acceptance, the Engineer may inspect the mains with a remote control television unit. The Contractor shall assist by notifying

the residents to refrain from use of these services during the inspection. The Contractor will be required to repair at his expense and in an approved manner, all defects in his workmanship disclosed by these tests and inspections before final acceptance.

3.06 MEASUREMENT

Sewer mains will be measured in place and the length determined by measuring from center to center of manholes or other subsurface structures of which they form a part.

Depth of sewer mains for payment purposes shall be determined by measurement from the invert to the top of casting at original existing grades of connecting manholes. Depth of manholes shall be measured from invert to the top of casting.

3.07 PAYMENT

Payment for relocation, replacement and restoration of existing sewer mains or installation of new sewer mains shall be made at the contract unit price per linear foot of the size and depth, which includes excavation, bypass pumping up to a 3-inch pump as necessary, complete shoring, foundation lumber, bedding, installation of new main, including fittings, backfill, drainage fabric and tie-ins. If the existing sewer main is to be removed or abandoned in place, the cost shall include removal or abandonment of the existing sewer main. The Contractor will be paid for setting up and operating bypass pumping when using a pump greater than or equal to 4". The use of a pump greater than or equal to 4" will be allowed only with the authorization of the Engineer.

Payment for "Remove and Replace Sewer Manhole" shall be made at the contract unit price per foot height, including excavation, granular bedding, foundation slab and backfilling. If the existing manhole is to be replaced, the cost shall include removal of the existing sewer manhole.

Payment for "Adjust Manholes by Raising/Lowering" shall be made at the contract unit price per each, including excavation and removal of the existing manhole casting and cover, adjustment by removal of bricks and or installing brick and mortar and backfilling.

Payment for "Furnish and Install 6-inch Sewer House Connection" shall be made at the contract unit price per linear foot, including excavation, installation of a wye or tee in the main, PVC pipes, fittings, tie-in at property line, and backfilling.

Payment for "Make 6-inch Service Connection Direct to Manhole" shall be made at the contract unit price per linear foot, including excavation, installation of PVC pipe, fittings, tie-into manhole with a sand impregnated joint as shown on S&WB Drawing No. 6178-B-6, tie-in at property line, and backfilling.

Payment for "Furnish and Install Vertical Stack Fittings and Tie-In" shall be made at the contract unit price per each, including installation of new PVC tee into existing or new mains with a six-inch (6") stack, installation of wye or double wye as shown on S&WB Drawing No 6312-E5-B. Payment for house connection laid out of the wye fitting shall be at the unit price bid per foot.

Payment for "Set up Sewer System Equal to or Greater than 4-inch" shall be made at the contract unit price per each, including a high capacity trash pump, suction hoses, discharge piping, traffic control, operation and maintaining the bypass system and any necessary ramping to allow for the flow of vehicular traffic, and disassembling the system.

New or replaced sewer house connections shall be installed so as to avoid conflict with new or proposed subsurface facilities.

3.08 CLEAN UP AND RESTORATION OF WORK AREAS

Upon completion of work and before acceptance and final payment, Contractor shall cleanup work areas and adjacent property, and removes all surplus and discarded materials, rubbish and temporary structures. He shall leave the lawn areas, adjacent properties, streets and medians in clean condition throughout the entire length of job. Grass areas must be restored to their original condition and topped with not less than two inches of river sand. Shrubbery, grass, signs, etc. that was temporarily removed during construction shall be replaced in their original condition. Drains and catch basins along the route that are clogged with mud as a result of this work must be cleaned to the satisfaction of the Engineer. No extra payment will be made for this site restoration.

***END OF SECTION 7 **

SECTION 8

SEWER FLOW CONTROL

PART 1.0 GENERAL

1.01 BY-PASS PUMPING

Use of by-pass pumping to prevent surcharging and maintain un-interrupted flow through sewage collection system while allowing Contractor to provide reliable sewer service to the sanitary sewer users at all times and to isolate sewer line manholes and/or sewer line segments designated for cleaning, rehabilitation, and television inspection operations. Includes installation and operation of bulkheads, plugs, hoses, piping and pumps to maintain sewage flow and prevent backup and overflow.

The Contractor is to follow *Section D of the General Specifications* for information and procedures pertaining to the construction of sewers, except where parts of Section D have been changed by these special specifications.

1.02 MEASUREMENT & PAYMENT

The Contractor will be paid as an each item for setting up and operating bypass pumping when using a pump less than or equal to 4 inches.

The payment for the bypass pump greater than 4 inches will be paid as an each item which will include the setup, maintain and operation of the bypass pump. The use of a pump greater than 4 inches will be allowed only with the authorization of the Engineer.

Any and all cost of bypass pumping, both set up and operational maintenance, including any necessary ramps over the bypass piping and traffic control, shall be included in the price bid for the repair when using a pump less than 4”.

Any delay that the contractor experiences due to surcharging of the sewer system shall be documented in writing and delivered to the Engineer when encountered. The delay time will be taken into consideration when calculating start and completion times for the various phases of work for purposes of liquidated damages to be paid by the Contractor for the failure of the Contractor to start or complete on time.

PART 2.0 MATERIALS

When by-pass pumping or well-pointing in residential areas, utilize noise reducing pumps and said pumps must be approved by the Engineer.

Pumps and/or generators must be provided with noise attenuators when in a residential area and pumping is required after hours.

PART 3.0 EXECUTION

3.01 PROCEDURES AND METHODS

Prior to beginning sewer cleaning, rehabilitation and television inspection operations demonstrate pumping system is in good working order.

The Contractor shall isolate the segment(s) of sewer where the work is to occur by plugging the upstream and downstream manholes. Should the sewage build up to the top of the largest size sewer main in the upstream manhole, or if directed by the Engineer, the Contractor shall pump the sewage through bypass piping to a sewer manhole downstream of the work.

The scope of this work includes the by-passing as many as two city blocks of sewer.

The pumping of sewage into drain facilities is strictly prohibited unless authorized by the Engineer. The Sewerage and Water Board will be reimbursed by the Contractor in accordance with *section A1, paragraph 27 of the Sewerage & Water Board General Specifications*, for all costs paid by the Sewerage and Water Board for the necessary administrative work, remedial work and for any fines related to an unauthorized discharge.

No sewer main shall be left open overnight; instead, a temporary tie-in shall be made between the ends of the new and existing main, and plugs at manholes shall be removed so as to allow sewage flow until work is resumed.

END OF SECTION 8

SECTION 9 CURED-IN-PLACE LINER (CIPP)

PART 1.0 GENERAL

1.01 REQUIREMENTS FOR CIPP LINING

- A. The Contractor shall furnish all labor, materials, equipment and supervision for the CIPP lining of all existing sewer mains between manholes. The work shall also consist of internal reinstatement of sewer service laterals complete with cure-in-place lining. The Contractor shall provide the necessary dewatering and bypassing required during execution of this work at no direct pay.
- B. The Contractor shall furnish an extended warranty for liner materials from the liner manufacturer for a total of 5 years from the date final Acceptance.
- C. The Sewerage and Water Board of New Orleans will determine the ability of the lowest bidder to install CIPP Liner as specified herein. Along with other factors to be considered by the Boards staff will be the contractor's experience in sewer line repairs by CIPP liner installation and the contractor's history of linear feet of furnished product including the sizes applicable for this project. The contractor or subcontractor should also be licensed by the system manufacturer. Should the lowest bidder be found "non-responsive" then an informal hearing will be held to provide lowest bidder the opportunity to refute the reasons for the disqualification
- D. All work to be done on Sewerage Systems will be as shown on the plans and as directed by the Engineer. All workmanship, materials and tests shall conform to Section D of the General Specifications of the Sewerage and Water Board, S&WB Standard Drawings, and Sewerage and Water Board ***Standard Drawing No. 7260-SWD***, except as noted hereinafter. The Contractor shall notify the Chief of Engineering of the Sewerage and Water Board in writing not less than three or more than ten working days in advance of starting the job, in order to allow for scheduling the inspection of the work. Failure to do so prior to starting work will result in the Contractor not being paid for installment of CIPP without Sewerage and Water Board inspection.

All workmanship and materials required to perform this work, shall conform to the current General Specifications of the Sewerage and Water Board and the Department of Public Works except as noted hereinafter.

- E. The Contractor performing work covered in this section shall be required to coordinate his operations with the Sewerage and Water Board and other utilities prior to making any excavation. The Contractor shall exercise caution in making excavations to avoid damage to these services and other utilities.
- F. The Contractor will be furnished with a list of the locations of water and sewer house connections from the Sewerage and Water Board. It will be the Contractor's responsibility to verify the location of these so as to avoid damage. Furnishing this information should not be construed as

a waiver of the Contractor's liability, but rather an attempt on the part of the Board to minimize the Contractor's hazard. The existing house connections submitted in the lists are from S&WB records and could vary from the actual location. Any damage to the existing water, sewer and drain connections resulting from negligence will be repaired by the S&WB at the expense of the Contractor. The Contractor is also responsible for damage to other utilities and the property of others.

- G. Existing sewer service connection shall be internal reinstatements with the cured in place lining.

1.02 MEASUREMENT AND PAYMENT

- A. Sanitary Sewer Rehabilitation by Full Segment Cured-in-Place Lining Measurement: Measurement shall be on a per linear foot basis between centerlines of consecutive manholes for rehabilitation of nominal diameter line segments as shown on the bid schedule lined by cured-in-place lining products.
- B. Payment: Payment shall be made at the unit price bid per linear foot in accordance with these specifications; and shall include pre- and post-installation television inspection, cleaning, setup activities (e.g. safety procedures, sewage flow control, traffic control, preparation and insertion of liner, etc.), curing of liner, cutting liner ends and sealing liner in manholes, testing, initial reinstatement to 75% of full opening of all active service connections, clean up, and any other related items necessary to complete this item of work.
- C. Sanitary Sewer Service Internal Reinstatement Measurement:

Measurement for the sanitary sewer service internal reinstatements by robotic devices shall be made on a per each reinstated service basis.
- D. Payment: Payment for the sanitary sewer service internal reinstatements shall be made at the unit price bid per each in accordance with these specifications; and shall include post-lining television inspection, internal robotic equipment, identification of active service connection locations, final "buffing out" to full opening diameter, sewage flow control (except diversion pumping), traffic control, and any other related items necessary to complete this item of work.

PART 2.0 MATERIAL

2.01 LINER

All CIPP lining products shall comply with the latest versions of ASTM F1216 - Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube, or ASTM F1743 - Rehabilitation of Existing Pipelines and Conduits by Pulled-in-Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP). The Contractor shall furnish a general purpose unsaturated, polyester or thermosetting vinyl ester resin and catalyst system that provides cured physical strengths specified herein.

The flexible tube shall consist of one or more layers of needled felt or equivalent woven or non-woven material manufactured under quality controlled conditions set by the manufacturer, and be capable of carry resin and withstanding installation pressures and curing temperatures. The tube shall be compatible with the resin system used, and shall contain no intermediate layers that delaminate after resin curing. It shall not be possible to separate any layers with a probe or knife blade such that the layers separate cleanly or the probe or knife blade moves freely between the layers.

The flexible tube material shall be able to stretch to fit irregular pipe sections and negotiate bends. The tube shall be fabricated to a size that when installed will neatly fit the internal circumference and length of the existing sanitary sewer main lines and service lateral lines when installed. Allowance shall be made for circumferential stretching during insertion so that the final cured product is snug against the wall of the host pipe and free of fins and buckles.

The resin used shall be a thermoset resin system that is compatible with the CIPP installation. The resin shall be able to cure in the presence of water and the initiation temperature for cure shall not be more than 180° F.

The liner thickness shall be sized for a minimum hydrostatic and earth load of 8 feet. The earth load and hydrostatic load shall be increased to the manhole depth for bury depths in excess of 8 feet unless otherwise noted.

The wall color of the interior pipe surface of the CIPP after installation shall not be of a dark or non-reflective nature that could inhibit proper CCTV inspection.

The liner shall be structurally designed for a fully deteriorated host pipe/direct buries condition, prism loading, and AASHTO Standard Specification for Highway Bridges HS-20-44 live loading due to traffic. The liner shall be designed for the following conditions:

DESIGN PARAMETER	VALUE
Minimum Service Life	50 years
Soil Density	120 pounds per cubic foot (lb/cf)
Soil Modulus	1000 pounds per square inch (psi)
Minimum Safety Factor	2.0
Ovality Factor	2%
Maximum Deflection	5% in vertical axis
Long Term Modulus Reduction Factor	50%

The CIPP liners shall conform to the minimum structural standards as listed below in accordance with the latest versions of ASTM D790 - Test Methods for Flexural Properties of Unreinforced and Reinforced

Plastics and Electrical Insulating Materials and ASTM F1216 - Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube:

FINAL CIPP	MINIMUM REQUIRED
Flexural Stress	4,500 psi
Short Term Flexural Modules	250,000 psi
Long Term Flexural Modules	125,000 psi

The liner shall be fabricated from materials which when complete are chemically resistant to and will withstand internal exposure to domestic sewage having a pH range of 5 to 11 and temperatures up to 125° F. CIPP liners shall meet the minimum chemical resistance requirements in accordance with the latest version of ASTM F1216 - Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube.

The liner shall be furnished to the following minimum thickness, or the thickness based upon design criteria as specified herein, whichever is greater:

Pipe Diameter (inch)	Depth of Sewer Invert (feet)	CIP Nominal Thickness (millimeter) (inches)
6	0 to 20	4.5 0.177
8	0 to 20	6.0 0.236
10	0 to 15	6.0 0.236
10	15.1 to 20	7.5 0.295
12	0 to 10	6.0 0.236
12	10.1 to 20	7.5 0.295

15	0 to 10	7.5 0.295
15	10.1 to 15	9.0 0.354
15	15.1 to 20	10.5 0.413
18	0 to 10	9.0 0.354
18	10.1 to 15	10.5 0.413
18	15.1 to 20	12.0 0.472
21	0 to 10	10.0 0.374
21	10.1 to 20	15.0 0.555
24	0 to 10	12.0 0.472
24	10 to 22	15.0 0.590
27	0 to 10	12.0 0.465
27	10.1 to 20	18.0 0.705
30	0 to 10	15.0 0.590
30	10 to 22	21.0

		0.817
36	0 to 20	24.0 0.921

2.02 EXPANDING HYDROPHILIC RUBBER JOINT SEAL

The rubber joint seal shall be an extended hydrophilic rubber compounded from chloroprene (Neoprene) rubber and hydrophilic resin, which expands on contact with water.

The rubber joint seal shall be bonded with adhesive on one face to hold it in place during assembly.

On contact with water, the rubber shall swell a minimum of 8 times its original volume, if necessary, and mold itself to completely fill any gaps and exert pressure evenly to ensure the seal. High compression or bolt up forces shall not be necessary to affect a complete and watertight seal.

2.03 CHEMICAL GROUT

The chemical grout shall be a hydrophilic liquid that is water reactive and will change from a free-flowing liquid to a water impermeable elastomeric solid upon injection to stop excessive infiltration at the point where the CIPP liner enters the manholes. A reaction (curing) which produces a chemically stable and non-biodegradable, tough, flexible gel. The chemical grout shall be a urethane liquid in uncured form suitable for pumping with a moderate viscosity and variable gelling and curing times. The polyurethane chemical grout shall be Scotch-Seal 5610 by 3M, Avanti Av-254, or approved equal.

Acceptable urethane base gel chemical sealing materials shall meet or exceed the following requirements:

- A. The liquid shall have a solids content of 80% and a specific gravity of 1.04 to 1.11
- B. The liquid shall have a viscosity of 300 to 1,000 centipoise at 70 F.
- C. The water used to react to the pre-polymer should have a pH of 5 to 9.
- D. Gel times shall be in accordance with the manufacturer's recommendations.
- E. The grout shall have the ability to increase viscosity, density, gel strength and resistance to shrinkage by the use of additives in the reaction water.
- F. A reinforcing agent shall be added to the reaction water at the manufacturer's suggested rate. This agent is intended to increase the polyurethane gel's resistance to wet/dry cycles, freeze/thaw cycles, and solid movement stresses. The reinforcing agent shall be appropriate for the specific grout product that is to be used.

- E. Additional chemical grout additives such as catalysts or accelerators as needed to make the grout function properly shall be as manufactured by 3M, Avanti, or approved equal and shall be used in a manner approved by the manufacturer.

PART 3.0 EXECUTION

3.01 DELIVERY, STORAGE, AND HANDLING

The Contractor shall comply with the pipe manufacturer's printed recommendations for delivery, storage, and handling of all products. The Contractor shall keep products safe from damage. The Contractor shall promptly remove damaged products from the job site and replace damaged products with undamaged goods at no additional cost to the Board.

3.02 PRIVATE SERVICE LINE SHUTDOWN

When it is necessary to shut down a private sewer service line while work is in progress and before the service lines are reconnected, the residents are to be notified by the Contractor not more than one week prior to and again not more than 24 hours immediately prior to the shutdown. No sewer or water service is to remain out of service for more than a period of eight (8) hours, and not before 8:00 a.m., or after 6:00 p.m. Sewage from the services or main line shall be discharged or diverted into an adjacent or downstream sewer only.

3.03 PREPARATION

The Contractor shall carry out his operations in accordance with all OSHA and manufacturer's safety requirements. Particular attention is drawn to those safety requirements involving the entering of confined spaces.

The Contractor shall take field measurements to verify the existing pipe diameter, ovality and length prior to manufacturing liners. The manufacturer shall incorporate these measurements into the manufacturing process of the liner. The outside of the flexible tube shall be marked along its full length at regular intervals not to exceed five (5) feet.

It shall be the responsibility of the Contractor to remove all internal debris such as solids and roots and clean the existing sewer line prior to installation of the liner .

Inspection of existing sewer lines shall be performed by experienced personnel trained in locating breaks, obstacles and service connections by CCTV. The interior of the line shall be carefully inspected to determine the location of any conditions, which may prevent proper installation of the CIPP liner into the main lines or service lateral lines, and such conditions shall be noted so they can be corrected. A video log and data log shall be kept of conditions that need to be corrected on the existing sewer line.

The Contractor shall provide for the flow of sewage around the section or sections of pipe designated for lining as specified in **SECTION 08 SEWER FLOW CONTROL**. The Contractor shall be completely responsible for preventing service line back-ups during the CIPP liner installation and curing periods.

The Contractor shall clear the line of obstructions such as solids, protruding gaskets, dropped joints, protruding service connections or collapsed pipe that will prevent the insertion of the liner, as noted during pre-rehabilitation CCTV inspection. If inspection reveals an obstruction that cannot be removed by conventional sewer cleaning equipment, the Contractor, upon approval from the Engineer, shall make a point repair to uncover and remove or repair the obstruction prior to lining.

Location and distance from the upstream and downstream manholes of all internal and external point repairs shall be determined before rehabilitation commences.

Only those sewer services that are live and active shall be repaired, or reinstated after the sewer main has been lined or replaced.

The Contractor shall note all of the sewer lines segments have not been televised in their entirety due to obstructions blocking further entry, etc... These obstructions shall be cleared to allow CCTV viewing of the entire segment length before lining is commenced. The number of service connections on some sewer segments may exceed the number of buildings actually served. It is the Contractor's responsibility to determine through dye testing, CCTV inspection or other acceptable methods, the services that are live and require reinstatement prior to commencing lining of the sewer main. Services that are confirmed to be inactive shall not be reinstated. Services that are inactive, but reinstated, shall be plugged at no additional expense to the Board.

3.04 INSTALLATION

Installation shall be accomplished by inversion or winched-in-place methods and cured in place by ambient temperature or circulating hot water or steam to produce a hard, jointless, impermeable pipe repair.

Installation procedures shall be in accordance with the latest versions of ASTM F1216 - Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube or ASTM F1743 - Rehabilitation of Existing Pipelines and Conduits by Pulled-in-Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP), and the manufacturer's recommendations.

The Contractor shall designate a location where the reconstruction tube will be vacuum impregnated prior to installation. The Contractor shall allow the Engineer to inspect the materials and "wet out" procedure. Sufficient excess resin shall be used in accordance with the latest version ASTM F1216. A roller system shall be used to uniformly distribute the resin throughout the tube.

Before installation begins, the tube manufacturer shall provide the minimum pressure required to hold the tube tight against the existing conduit, and the maximum allowable pressure so as not to damage the tube. Once the installation has started the pressure shall be maintained between the minimum and maximum pressures until the installation has been completed.

The curing of the CIPP must take into account the existing pipe material, the resin system, and ground conditions (temperature, moisture level, and thermal conductivity of soil). The post-cure temperature

should be held for a period as recommended by the resin manufacturer, during which time the recirculation of the water and cycling of the head source to maintain the temperature continues.

The bond between all CIPP layers shall be strong and uniform. All layers, after cure, shall be completely saturated with resin.

The CIPP shall be cooled to a temperature below 100°F before relieving the hydrostatic head. Care should be taken in release of the static head so that a vacuum will not be developed that could damage the newly installed liner.

Where practicable, liners can be installed in continuous runs through manholes where there are two or more continuous sewer segments requiring lining, especially to connect several short segments with continuous lining.

The temperature of water discharged to the sewer system from processing liners shall not exceed 125° F maximum, or the level allowed by State or local standards if less than 125° F.

The Contractor shall furnish on-site on a continuous basis one (1) additional operational robotic cutter assembly train and key spare components as a “stand-by” unit in the event of primary equipment breakdowns.

3.05 POST INSTALLATION

After installation of the liner in a full segment pipe, a minimum of one (1) inch of the liner material shall be left to protrude from the wall of the entrance and the exit manhole.

The Contractor shall install a joint seal at all manhole inlet and outlet connections to seal the area where the line enters or leaves each manhole. The Contractor shall use grout to dress up around the end of the liner. This space may be sealed with a mechanical seal, chemical seal, or combination of both. The method used shall be as approved by the Engineer.

The upstream and downstream manholes shall be inspected and any holes or voids in the manhole wall immediately surrounding the new liner shall be sealed with a hydrophilic rubber joint seal and chemical grout as specified herein. The Engineer shall approve the seal.

Where liners of any type are installed in two or more continuous manhole segments, the liner invert through the trough of intermediate manholes shall be left intact. Final finishing of the installation in those intermediate manholes shall require removal of the top of the exposed liner and neat trimming of the liner edge where it touches the lip of the manhole bench.

Portions of any piece of liner material removed during installation shall be available for inspection and retention by the Engineer. Any unrestrained samples shall not be used for testing purposes.

The Contractor shall reinstate openings for all drop assemblies after relining the mainline sewer.

Service connections shall be reinstated without excavation, utilizing a remotely controlled cutting device monitored by a CCTV camera. The coupons from this action shall be collected downstream and submitted to the Engineer. The Contractor shall provide certification that he has the required equipment to reinstate the service connections as specified herein.

After the liner has been installed, in the event that the Contractor chooses to temporarily reinstate service lines, all active existing services may be temporarily reinstated by punching through the liner from the interior of the pipeline. Temporary reinstatements shall allow normal flow from the service line into the mainline. Final reinstatement of all active services within a rehabilitated line segment shall be performed internally using a robotic cutter within 48 hours of curing and buffed to a minimum of 95% of the original service opening size. The finished opening shall contain no jagged edges.

3.06 TESTING

During the cool down process, after installation and curing of the liner, the Contractor shall perform tests on the sewer line to determine if it is watertight. No separate payment will be made for testing.

The Contractor shall furnish all necessary equipment to conduct the test.

The sewer shall be tested using either exfiltration test methods in accordance with the latest version of ASTM F1216 – Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated tube or air test methods as specified herein.

Air Testing

Each section of new CIPP liner shall be tested between successive manholes by plugging and bracing all openings in the pipe and the upper ends of all service laterals. Prior to insertion in the sewer, each plug shall be checked with a soap solution to detect any air leakage. If any leaks are found, the air pressure shall be released and the leaks eliminated or the plug replaced.

The test of the pipe and service laterals shall be conducted in the presence of the Engineer. Testing of pipe shall be performed in accordance with the latest version of ASTM F-1417.

It is the Contractor's responsibility to have the pipe clean and to determine the ground water level prior to testing the pipe.

Air pressure in the sewer shall be slowly increased to 4.0 psi above groundwater pressure (1.0 psi for each 2.3 feet of water elevation above the highest point of the pipe). Do not allow the air pressure at any point in the pipe to reach 9.0 psi under any circumstances. Allow the pressure to stabilize for 5 minutes, then reduce the pressure to 3.5 psi above groundwater pressure and start the test. Stop the air release and record the decrease in pressure over time. The time taken for the pressure to decrease from 3.5 to 2.5 psi above groundwater pressure shall be equal to or greater than the time below.

Pipe Diameter (in.)	Minimum Time Lapse (min:sec)							
	100 ft	150 ft	200 ft	250 ft	300 ft	350 ft	400 ft	450 ft
8	7:34	7:34	7:34	7:34	7:36	8:52	10:08	11:24
10	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04
18	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41
21	19:50	26:10	34:54	43:37	52:21	61:00	69:48	78:31
24	22:47	34:11	45:34	56:58	68:22	79:46	91:10	102:33
27	28:51	43:16	57:41	72:07	86:32	100:57	115:22	129:48
30	35:37	53:25	71:13	89:02	106:50	124:38	142:26	160:15
33	43:05	64:38	86:10	107:43	129:16	150:43	172:21	193:53
36	51:17	76:55	102:34	128:12	153:50	179:29	205:07	230:46

The time for the pressure to fall from 3.5 to 2.5 psi, both above groundwater pressures, shall not be less than 10 seconds regardless of pipe diameter.

If the time is less than the allowable time, the pipe will be considered defective and shall be repaired and re-tested at no additional cost to the Board.

Safety Provisions: Securely brace the plugs used to close the sewer pipe for the air test in order to prevent the unintentional release of a plug, which can become a high velocity projectile. Locate gauges,

air piping manifolds, and valves at the top of the ground. No one shall be permitted to enter a manhole where a plugged pipe is under pressure 4 pounds (gauge) air pressure develops a force against the plug in a 12-inch diameter pipe of approximately 450 pounds. Provide a safety release device set to release at 10 psi between the air supply and the sewer under test. Regardless of the outcome of any test, repair any noticeable leak.

After completing lining and service reinstatement, every liner shall be CCTV inspected segments not fully conforming to these Specifications must be immediately brought to the Engineer's attention. The Contractor shall furnish a written proposed method of correction within 24 hours for approval by the Engineer.

The Board will have a certified independent testing lab analyze finished liner samples taken from the restrained sample located at the manhole invert. The Contractor shall furnish samples directly to the Engineer within 2 days after installation.

A minimum of one (1) sample shall be taken from every four (4) segments installed. The retained samples shall be a minimum of one (1) foot in length. The Contractor shall place a sample mold aligned with and the same size as the existing sewer in such a manner as to allow the installation of the liner material through the retaining sample mold. This sample mold shall be made of SDR 35 PVC, C900 PVC or an Engineer approved equal. The resin-impregnated tube shall be installed and cured through this restraining mold in order to obtain a liner sample representative of the actual liner physical characteristics. All samples shall be labeled with the project number, date of installation, pertinent manhole numbers, nominal thickness, flow direction, and location of installation. The Contractor and Engineer shall acknowledge receipt and transfer of all samples. The independent testing lab will conduct tests in accordance with the latest versions of the ASTM standards for flexural strength, flexural modulus and wall thickness. A sample will be provided by the Contractor to the Engineer for all CIPP installation over 18" inches in diameter to be tested in accordance with ASTM standards.

3.07 ACCEPTANCE

The finished CIPP liner shall be fully rounded and free from visible defects, including but not limited to damage, deflection, holes, delamination, ridges, cracks, uncured resin, foreign inclusions or other objectionable defects as determined by the Engineer.

There shall be no visible infiltration through the liner, or around the liner at manhole or service line connections. The Contractor shall be required to repair any visible leaks in a manner approved by the Engineer.

3.08 NON-CONFORMING WORK

If the thickness, flexural strength, or flexural moduli of elasticity of the installed CIPP liner are less than 80% of the approved design values, the product is considered unacceptable. A method of repair or replacement shall be submitted for review and approval by the Engineer. All work required to remedy non-conforming work shall be at no additional expense to the Board.

For all instances, as described in this Subsection, other than thickness, flexural strength, and flexural modulus of elasticity, where the CIPP liner is deemed unacceptable, the Contractor shall submit a method of repair or replacement for review and approval by the Engineer. All work required to remedy non-conforming work shall be at no additional expense to the Board.

Where post-installation thickness measurements and/or physical property testing is performed, payment for installed cured-in-place pipe shall be made in accordance with the following:

If the thickness, flexural strength, or flexural modulus of elasticity of the installed CIPP are 90% or greater than the specific values, full payment shall be made accordingly. If the thickness, flexural strength, or flexural moduli of elasticity of the installed CIPP are between 90% and 80% of the specified values, with all at least 80% of the specified values, payment shall be based on:

Adjusted Unit Price = Unit Price Bid x Value Factor, where:

Value Factor = [\ast thickness + \ast flexural strength + \ast flexural modulus of elasticity] / 3.

\ast Insert actual measured or tested result expressed as a percentage of specified value. Maximum allowable percentage is 100%.

If a defect repair is required after the liner has cured, a short segment tube shall be used to splice across the defect repair. The overlap on each defect shall be twice the diameter, or 12 inches, whichever is greater.

3.09 ABANDONMENT OF SEWER RELINING

If pre-installation CCTV inspection reveals that no sewer relining is required in the pipe segment between manholes, due to point repairs or relining having been performed since the last televised inspection, then sewer relining shall be abandoned.

END OF SECTION 9

SECTION 10
SERVICE CONNECTION SEAL + LATERAL FULL WRAP STYLE OR BRIM STYLE
CONNECTION SEAL

PART 1 GENERAL

1.01 SERVICE LATERAL LINING

It is the intent of this portion of the specification to provide for the re-construction of a service lateral and connection in 8" through 24" mainline pipes, normally without excavation, by the installation of a one piece resin impregnated, flexible, non-woven felt tube installed into the existing lateral connection utilizing a pressure apparatus positioned in the mainline pipe. Curing shall be accomplished by use of ambient cure resin or other approved method to cure the resin into a hard impermeable cured-in-place (CIPP) pipe liner. When cured, the liner shall have a watertight connection seal at the mainline and extend over the length of the service lateral in a continuous one piece structural pipe- within-a-pipe.

1.02. QUALIFICATIONS OF CONTRACTOR

The contractor or subcontractor performing the work of this section shall be employees of the company manufacturing the CIPP Lateral Lining system components, or shall be licensed by the system manufacturer. The Manufactured System must have a minimum of a five (5) year history of satisfactory performance with a minimum of 10,000 CIPP lateral installations. The contractor or subcontractor shall have a minimum of two (2) years of service continuous experience installing CIPP Lateral Lining in pipe of similar size, length and configuration as proposed in this project. In addition, the contractor or subcontractor shall have successfully installed 5,000 CIPP laterals in a wastewater collection system application. The onsite Superintendent must have installed over 2,500 CIPP laterals of like condition for this geographic area and have minimum of 5 years of CIPP industry experience.

1.03 MEASUREMENT and PAYMENT:

Measurement for the work included in this section will be in accordance with the units set forth in the proposal. Unit prices shall include all labor, materials and equipment required to complete the work as specified. The unit prices shall also include CCTV prior to and after lining, lateral cleaning, bypass pumping of mainline flow, installation of cleanouts (if required by the lateral lining process) and traffic control (standard cones and signs).

Payment for the work included in this section will be in accordance with the prices set forth in the proposal for the quantity of work performed. Progress payments will be made monthly based on the work performed during that period.

Cleaning of the lateral pipe prior to lining: Confirmation of cleaning shall be provided via video inspection.

CIPP lining of up to 5' of lateral pipe: Confirmation of lining length shall be provided via field measurement of the liner prior to installation and via video inspection.

CIPP lining of each additional lineal foot (after 5') of lateral pipe. Confirmation of lining length shall be provided via field measurement of the liner prior to installation and via video inspection.

1.04 WARRANTY:

Contractor warrants to Owner that all products and work provided by Contractor to Owner under this Agreement will be free from material defects in workmanship and materials for a period of five years from the earlier of the date on which Contractor's work is accepted by Owner or the date on which the Contractor completes performance and leaves the worksite. In the event that a material defect in workmanship or materials supplied by Contractor is found during the five year period following acceptance of the work, then such defect shall be repaired, replaced or adjusted by Contractor at no additional cost to Owner. Owner's exclusive remedy in the event of any warranty claim hereunder is limited to correction of such defect, adjustment, repair or replacement as the Contractor shall at its sole option elect. The foregoing warranty is the exclusive warranty provided by contractor and is given in lieu of all other warranties, whether express, implied or statutory, including but not limited to, any implied warranties of merchantability or fitness or suitability for a particular purpose or use; and all other warranties are hereby expressly disclaimed.

In no event shall Contractor's liability for warranties hereunder exceed the purchase price paid by the Owner for Contractor's work and materials.

The warranty set out above shall be void and of no effect in the event that (i) Contractor is not notified of claim of defect within the five year period provided above; (ii) Contractor is not provided timely and unrestricted access to the site at which the claimed defect is located in order to investigate and/or repair, adjust or replace the work or materials claimed to be defective or Contractor is not provided suitable working conditions to perform such investigation, repair, adjustment or replacement; (iii) any materials or work is exposed to chemicals or substances other than those listed in the Specifications to this Agreement as accepted by Contractor; (iv) site conditions or pipeline, conduit or access way conditions are other than those disclosed to and accepted by Contractor; (v) Owner's site, pipeline, conduit or access ways are cleaned or modified in a manner not disclosed in writing to and accepted in writing by Contractor in advance of commencement of Contractor's work or tampered with prior to, during or after completion of Contractor's work; or (vi) the work, the site at which the work is performed or the materials provided by Contractor are otherwise abused or misused.

1.05 RELATED SECTIONS

- a. Bypass Pumping (also included within this section)
- b. Pipe Cleaning (also included within this section)
- c. CCTV Inspection (also included within this section)

PART 2.0 MATERIALS

2.01 GENERAL REQUIREMENTS:

Tube and resin will meet the requirements of ASTM F 1216, F1743 and D5813.

In industrial areas subject to possible flows other than domestic sewage, the Owner shall obtain samples of the dry weather sewage flow to be analyzed for chemical content. This analysis shall be supplied to the Installer for his information.

2.02 CIPP LATERAL MATERIALS:

The liner shall be fabricated to a size that when installed will neatly fit the internal circumference of the conduit specified by the Owner. Allowance shall be made for circumferential stretching during insertion. The liner shall be a one piece joint-less polyester felt tube that will create a watertight seal at the mainline interface.

The minimum length shall be 36 inches (3 feet) to effectively span the distance from the lateral connection at the main or to the desired termination location in the service lateral pipe. For the purpose of this specification, the termination point shall be a distance within 18 inches of the intersection of a cleanout or property line. Lateral lining will be accomplished without a cleanout when possible. In the event a cleanout is required to complete the lining of the lateral, the Contractor is responsible for including the costs associated with the installation of the cleanout in his bid price for lateral lining (bid item 4 on page 8). When required, an overlap method is performed with a pull-in-process installation from a cleanout or access point back to the main. In either case, the lateral liner must provide a watertight seal at the mainline and a structural repair of the lateral over the specified length. The Installer shall verify the lengths in the field before impregnation of the resin.

Unless otherwise specified, the Installer shall furnish a specially designed, unsaturated, Polyester or Vinylester resin catalyst system compatible with the cured-in-place process that provides cured physical strengths specified herein.

2.03 PHYSICAL STRENGTH:

The structural performance of the finished pipe must be adequate to accommodate all anticipated loads throughout its design life. No cured-in-place pipe reconstruction technology will be allowed that requires bonding to the existing pipe for any part of its structural strength. Only resin vacuum impregnation will be allowed. If reinforcing materials (fiberglass, etc.) are used, the reinforcing material must be fully encapsulated within the resin to assure that the reinforcement is not exposed, either to the inside of the pipe or at the interface of the CIPP and the existing pipe.

Design methods are to be derived from traditionally accepted pipe formulas for various loading parameters and modes of failure. All equations will be modified to include ovality as a design parameter. The design method shall be submitted to the Engineer for approval prior to the pre-bid conference.

The CIPP lateral pipe shall conform to the minimum structural standards as listed below

PROPERTY	ASTM Standard	RESULTS
Flexural Stress	ASTM D 790	4,500 psi
Flexural Modulus	ASTM D 790	250,000 psi

2.04 APPROVED MANUFACTURES/PRODUCTS:

BLD "Service Connection Seal + Lateral" of BLD Services, LLC

or pre-approved equal

2.05. REFERENCES

This specification references ASTM test methods which are made a part hereof by such reference and shall be the latest edition and revision thereof.

ASTM F1216 - Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube

ASTM F1743 - Standard Practice for Rehabilitation of Existing Pipelines and Conduits by Pulled-in-Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP)

ASTM D5813 - [Standard Specification for Cured In Place Thermosetting Resin Sewer Piping Systems](#)

2.06 SUBMITTALS

- A. Product data
- B. Resin
- C. Long term test creep data confirming the resin system's 50 year design life in accordance with ASTM D2990.
- D. Chemical Resistance per ASTM F 1216
- E. Certificate of Compliance with ASTM F 1216
- F. Tube
- G. Certificate of Compliance with ASTM F1216
- H. If glass fiber reinforcement is used, CIPP strain Corrosion testing data in accordance with ASTM D3681
- I. CIPP wall thickness design calculations (for lateral liner) in accordance with ASTM F1216
- J. Contractor Qualifications/References-The contractor or subcontractor performing the lateral lining work shall provide a list of references, including Owner Name, Contact Name with phone number, Contract Name, start and completion dates and Quantity of Laterals Lined, with the CIPP Lateral Lining system used for that specific project provided, verifying compliance with these qualifications. Each project will include the name of the Contractor's Site Superintendent that completed the work. These references must satisfy the minimum requirements of:
 - 1. A five (5) year history of satisfactory performance in the CIPP industry
 - 2. A minimum of 5000 CIPP lateral installations
 - 3. A minimum of two (2) years continuous experience installing CIPP Lateral Lining in pipe of similar size, length and configuration as proposed in this project.
 - 4. A minimum of 2500 CIPP laterals in a wastewater collection system application.
 - 5. The onsite Superintendent must have installed over 2,500 CIPP laterals of like condition for this geographic area and have a minimum of 5 years of CIPP industry experience
 - 6. License or Certification that the proposed installer is approved to install the proposed product
- K. Product Qualifications/References
 - 1. The CIPP Lateral Lining system proposed for this contract must meet the following minimum requirements. The Contractor or Subcontractor performing the lateral lining work shall provide a list of references verifying compliance with these qualifications.
 - 2. A five (5) year history of sanitary sewer use

3. A minimum of 5000 CIPP lateral installations in the United States

PART 3.0 EXECUTION

3.01 INSTALLATION PREPARATIONS:

- A. **ACCESS** – If the Contractor requires access through a cleanout or access pit to complete the lateral lining, the costs associated with the cleanout or access pit will be the responsibility of the Contractor and must be included within bid item 3 on page 8. If a cleanout already exists or is required by the Owner, it shall be constructed of materials which provide a four inch (4”) minimum diameter circular opening, if service lateral is six inch (6”) than a six inch minimum diameter opening is required. Any cleanouts will comply with Page 9 and must be wye connections (Tee connection will not be permitted) to allow video inspection, cleaning and lining access.
- B. **SAFETY** – The Installer shall carry out his operations in strict accordance with all applicable OSHA standards. Particular attention is drawn to those safety requirements involving entering confined spaces.
- C. **CLEANING OF SEWER LINE** – The intent of this specification is for cleaning of the lateral to be accomplished from the mainline pipes via lateral launching equipment. If the lateral cannot be cleaned using industry standard cleaning heads that can be launched from the mainline then a cleanout will be required and considered changed conditions. The laterals shall be cleaned a sufficient length to ensure the specified length of sewer is ready for lining. It shall be the responsibility of the Installer to verify, prior to installation, that all internal debris has been removed from the sewer line. Internal debris consists of broken pipe sections, roots, loose gravel, etc.
- D. **INSPECTION OF PIPELINES** – It is the intent of this specification for inspection of the lateral to be accomplished from the mainline pipes via lateral launching equipment. If the lateral cannot be inspected using industry standard inspection equipment that can be launched from the mainline then a cleanout will be required and considered changed conditions. Inspection of pipelines shall be performed by experienced personnel trained in locating breaks and obstacles by closed circuit television. The interior of the pipeline shall be carefully inspected to determine the location of any conditions which may prevent proper installation of the lateral liner into the pipelines, and it shall be noted so that these conditions can be corrected. A DVD and suitable log shall be kept for later reference by the Owner.
- E. **BYPASSING SEWAGE** – The Installer, when required, shall provide for the flow of sewage around the section or sections of mainline pipe where the service lateral designated for lining is located. The bypass shall be made by plugging the line at an existing upstream manhole and pumping the flow into a downstream manhole or adjacent system. The pump and bypass lines shall be of adequate capacity and size to handle the flow. It is assumed that flows in the lateral specified for lining will not require bypass pumping.
- F. **USE OF SERVICE LATERAL**-It is required that the service lateral be inactive during the time of installation. This is normally accomplished by turning off the homeowner’s services or requesting that the homeowner relinquish using his services during the period of installation. Notification will be distributed to impacted residents 24 hours in advance of the lateral liner installation.
- G. **LINE OBSTRUCTIONS**- If inspection reveals an obstruction that cannot be removed by conventional sewer cleaning equipment, as in solids, dropped joints or collapsed pipe then the Installer shall make a point repair excavation to uncover and remove or repair the obstruction. Such excavation shall be approved in

writing by the Owner's representative prior to the commencement of the work and shall be considered as a separate pay item.

- H. LINED MAINS- In the case of lined mainline pipes, the lateral connection specified for rehabilitation shall be reinstated to 100% of its original size to accept the CIPP lateral.

3.02 INSTALLATION OF LATERAL LINING

The Installer shall designate a location where the liner will be vacuum impregnated prior to installation. The Installer shall allow the Owner to inspect the materials and "wet-out" procedure. A catalyst system compatible with the resin and liner shall be used.

The wet-out liner shall be loaded inside a pressure apparatus above ground and utilizing a hydrophilic sealant (or equivalent) on the backside of the connection to enhance a watertight seal. Also, a two-part 100% solid epoxy (reference ASTM C-881) or a Silicate Resin shall be applied to the lateral interface to enhance adhesion against the host pipe. The pressure apparatus, with an end attached to a robotic device, shall be winched through the mainline pipe to the service connection. The robotic device, together with a television camera, will be used to position the pressure apparatus' inversion elbow at the service connection opening. Air pressure, supplied to the pressure apparatus through an inversion hose, shall be used to invert the wet-out liner through the lateral pipe to the cleanout/access point or "Right of Way" point. The inversion head will be adjusted to be of sufficient pressure to cause the impregnated liner to invert completely in the lateral pipe and hold the tube tight to the pipe wall. Care shall be taken during the curing process so as not to overstress the tube.

Curing – In most circumstances, an accelerated ambient-temperature curing resin system will be utilized, however if a heat cure is required, the Installer shall supply a suitable heat source and recirculation equipment. The equipment shall be capable of delivering the approved heating medium throughout the section to the temperature required to affect a cure of the resin. This temperature shall be determined by the resin/catalyst system employed.

If a heat cure is required, the heat source shall be fitted with suitable monitors to gauge the temperature of the incoming and outgoing air/steam or water supply. Fluid temperature in the line during the cure period shall be recommended by the resin manufacturer. NOTE: No UV cure systems will be allowed.

Initial cure shall be deemed to be completed when inspection of the exposed portions of the CIPP appears to be hard and sound and/or the temperature gauge indicates that the temperature is of a magnitude to realize an exotherm. The cure period shall be of a duration recommended by the resin manufacturer, as modified for the installation process.

Cool-down – The Installer shall cool the hardened CIPP to a temperature below 100°F before relieving the pressure in the pressure apparatus. Cool-down may be accomplished by the introduction of cool air into the pressure apparatus to replace water being forced out of the pressure apparatus. Care shall be taken to maintain proper pressure throughout the cure and cool-down period.

Finish – The finished CIPP shall be a watertight connection seal at the mainline and extend continuous over the entire length of the service lateral and be free of dry spots, lifts, and delamination. This continuous one piece structural pipe-within-a-pipe shall not inhibit the closed circuit television post video inspection of the mainline or service lateral pipes.

Testing – For every 50 laterals, one flat plate sample shall be taken and sent to a 3rd party test laboratory for confirmation of short term flexural modulus and strength properties in accordance with ASTM F1216. The test results shall meet or exceed the values used in the design of the CIPP lateral liner.

During the warranty period, any defects which will affect the integrity or strength of the CIPP liner shall be repaired at the Installer's expense in a manner mutually agreed upon by the Owner and the Installer.

After the work is completed, the Installer will provide the Owner with a CD or DVD showing the completed work including the restored conditions.

3.03 CLEAN-UP:

Upon acceptance of the installation work, the Installer shall reinstate the project area affected by his operations.

END OF SECTION10

SECTION 11 TRENCHING, BACKFILLING & COMPACTION

PART 1.0 GENERAL

1.01 SECTION INCLUDES:

Trenching
Backfilling
Compactions

1.02 MEASUREMENT AND PAYMENT

- A. **HOUSE CONNECTIONS** For the purpose of calculating select backfill quantities, the depth of the sewer house connection will be the distance from the top of the existing roadway to the top of the pipe, and this measurement will be taken at the curb and at the trench wall for vertical stack tie-ins and only at the curb for connections made directly to the wye on the main, since the average depth of the main will be known. These measurements will be made by the Engineer's inspector and shall be verified by the Contractor's foreman. An average depth shall be determined, and a compaction factor of 1.5 will be used. Allowable trench width for sewer house connections shall be three (3) feet. Deductions in volume will be made for the use of any native material authorized by the Engineer.
- B. **MAIN** For the purpose of calculating select backfill quantities in restoring the main, the volume will be based upon the length of repair authorized by the Engineer in the "work order", the authorized trench width and the average depth of the boundary manholes less the nominal pipe diameter, the stone bedding and any temporary surface stone and native material. Maximum trench widths allowed are given in *SECTION 11 PART 3.01*. To compensate for the required compaction, a compaction factor of 1.5 will be used.

1.03 PAYMENT FOR SELECT BACKFILL (RIVER SAND)

There is no direct pay for this item. The price for select backfill shall include all labor, equipment and materials for delivering the fill to the site. Complete installation costs shall be included in the price bid for the sewer restoration. Water will be provided from the nearest hydrant free to the Contractor only with the use of a spanner and water meter acquired from the Sewerage and Water Board.

1.04 PAYMENT FOR FILTER FABRIC

Payment for the filter fabric shall be based on the authorized trench width as given in *SECTION 11 PART 2*, the authorized length shall be included in the bid price of sewer restoration in the proposal. The 18 inch minimum lap between subsequent lengths shall be taken into account when figuring the bid price, there will be no direct pay for this lap.

1.05 PAYMENT FOR NATIVE MATERIAL USED AS BACKFILL

There will be no direct payment for labor, equipment or materials required to remove, store and properly reinstall the backfill when native material is used as backfill. This cost must be included in the price bid per foot for the sewer restoration. Only the Engineer has the authority to order the use of native material for backfill.

PART 2 MATERIALS

2.01 BACKFILL

All soils used for backfill will be subject to prior approval by the Engineer.

2.02 NATIVE CLAY MATERIAL

If the native material is clay and is free of all organic debris, and the Engineer authorizes its use, then it will be used for the first three feet of backfill. The use of filter fabric with this material as described below in 10-5 can only be authorized by the Engineer. The Contractor must remove all pipe fragments, roadway fragments and all other debris from this native material before replacing it in the trench. From that point to a point 9" below the bottom surface of the roadway, select backfill shall be used. The remaining portion of the trench through a paved area shall be backfilled with crushed stone (or approved equal) and compacted as described in *paragraph 18 of Section D in the General Specifications*. The Contractor will be required to maintain the trenches with sub-base as described in *SECTION 11 PART 3.08*.

2.03 NATIVE SAND MATERIAL AND FILTER FABRIC

If the native material is sand and is free of all organic debris, then it will be used for the first three feet of backfill, or to any thickness directed by the Engineer, and a filter fabric, acceptable to the Engineer, will be used, according to the Non-Standard Trench or Standard Trench method listed in *SECTION 11 Part 2.04 and 2.05*.

2.04 NON-STANDARD TRENCH

After constructing the trench, place the foundation lumber in the trench as required.

Cut the filter fabric to the appropriate width which allows for loose placement across the trench bottom width, a minimum of 24 inches to allow for compacted crushed stone, twice the outside pipe diameter and twice the trench width on top of the compacted stone. The fabric shall be laid in the trench with an 18" minimum overlap at the ends of subsequent lengths. The fabric shall be placed symmetrically in the trench to ensure a double layer of fabric across the width of the stone over the pipe prior to placing the backfill. Avoid wrinkles, folds and voids. Pin the sides of the fabric against the sides of the trench with lengths of boards spanning the width of the trench, or by an equivalent method acceptable to the Engineer, and avoid puncturing the fabric.

Place the bedding material in the trench and compact, install the pipe and remaining bedding material and compact as required.

Unfasten the fabric from the sides of the trench and lap over the crushed stone covering the pipe, ensuring a double layer of fabric across the width of the trench.

2.05 STANDARD TRENCH

Construct the trench, driving the sheeting and placing the mud sills and braces as required.

Place the native material in any voids between the top of the mud sills and the subgrade, then place the foundation planking on top of the mud sills.

Cut the filter fabric and install as in *SECTION 11 PARTS 2.04 and 2.05* above.

Place the bedding material on top of the filter fabric and foundation planking and compact, then install the pipe and remaining bedding material as required, then compact.

Unfasten the fabric from the sides of the trench and lap over the compacted stone covering the pipe, ensuring a double layer of fabric across the width of the trench.

2.06 UNSATISFACTORY NATIVE MATERIAL

If the native material is unsatisfactory to the Engineer, then select backfill will be used solely. In this case, filter fabric must be used in accordance with the applicable method described in *paragraph 10-5* above. The backfill shall be compacted to the point given in *paragraph 7-16* below the top surface of the roadway.

2.07 FILTER FABRIC

The filter fabric used shall comply with specifications detailed in *SECTION 4 PART 2.05*.

PART 3 EXECUTION

3.01 AUTHORIZED TRENCH WIDTHS

The authorized trench width allowed for solid wall PVC pipe shall be as follows:

MAXIMUM TRENCH WIDTH ALLOWED	PIPE DIAMETER
3 feet	6 inch
4 feet	8 inch and 10 inch
3 feet plus the outside diameter of pipe	12 inches and greater

3.02 STANDARD DRAWING NUMBER 4697-E5-A

The Sewerage and Water Board Standard Drawing numbered 4697-E5-A shall be used to determine the sizes, spacing and other dimensions related to the sheeting, bracing, and foundation lumber and also to stone placement for pipe trenches.

The Contractor shall bid the job according to the trench cross-sections given on this drawing.

The standard bottom shall not be installed as a prefabricated box. Instead, the wood sheeting shall first be driven and bracing placed, then the mud sills driven into the mud and properly braced, all voids filled with compacted bedding stone before the planking is installed. Then the filter fabric is to be placed in accordance with these special specifications. If sand is the native material in the trench, then, the wood sheeting shall be driven via a method, which meets the approval of the Engineer. Pounding of sheeting into soil will not be allowed. For this paragraph, the definition of sand shall be soil of which fifty (50%) percent or more of a representative sample by weight is retained on a number 200 sieve."

3.03 USE OF A TRENCH BOX

The Contractor will be required to sheet and brace the trench in accordance with the Sewerage and Water Board General Specifications and the Sewerage and Water Board Standard Drawings, except as changed in these Special Specifications. Before excavating any trench five (5) feet or more in depth, the Contractor shall submit to the Engineer a detailed plan showing the design of shoring, bracing, sloping or other provisions to be made for the workers' protection from the hazard of caving ground during the excavation of such trench. If the plan varies from the shoring systems standards, a Registered Civil Engineer shall prepare the plan. No excavation shall start until the Engineer has accepted the plan. At the option of the Contractor and with written permission from the Sewerage and Water Board Engineer; a trench box may be used under the following guidelines:

- A. Quantities paid will be based on the authorized trench width as stated in this section *part 3.01*. The trench box may not extend below the level of the top of the sewer main at any time during the repair.
- B. Removal of the trench box may only be accomplished vertically and in one-foot increments in conjunction with the backfilling.
- C. The trench box must be certified by a Professional Engineer and be in compliance to OSHA requirements.
- D. The minimum amount of sheeting must be installed (*SEE PARAGRAPH 3.02 OF THIS SECTION AND STANDARD DRAWING NUMBER 4697-E5-A*).

3.04 BACKFILLING

A. The backfilling of trenches shall be accomplished immediately after the installation of the new sewer main and house connections. All backfilling shall be accomplished in one foot lifts. Each lift must be compacted by the use of a mechanical tamper, or an equivalent acceptable to the Engineer, prior to the application of the next lift.

B. The Contractor must remove all pipe fragments, roadway fragments and all other debris from this native material before replacing it in the trench. From the height of native material directed by the Engineer, to a point 9" below the bottom surface of the pavement, select backfill shall be used. The remaining portion of the trench through a paved area shall be backfilled with crushed stone (or approved equal) and compacted as described in *PARAGRAPH 18 OF SECTION D IN THE GENERAL SPECIFICATIONS*. The Contractor will be required to maintain the trenches with sub-base as described in this section.

C. Flooding or jetting of the backfill to attain proper compaction will not be allowed unless the Contractor utilizes well point equipment, that meets prior approval of the Engineer, concurrently, to draw the excess moisture from the flooded backfill. The only occasion that flooding will be allowed without the use of well points is to fill voids around other utilities crossing the trench, once the backfill has been properly compacted up to the point where the mechanical tamper cannot compact the soil under and around that utility, or as otherwise directed by the Engineer. There will be no pay for well point equipment installation or maintenance when used for flooding or jetting.

3.05 COMPACTION

- A. The backfilling of trenches shall be accomplished immediately after the installation of the new sewer main and house connections. All backfilling shall be accomplished in one foot lifts. Each lift must be compacted by the use of a mechanical tamper, or an equivalent acceptable to the Engineer, prior to the application of the next lift.
- B. Regardless of the method of compaction, the Contractor will be responsible for attaining proper compaction as stated herein. Flooding or jetting may cause difficulty in obtaining the required 95% compaction, due to excessive moisture in the soil, and this must be considered when choosing the compaction method.

3.06 COMPACTION TESTS

Random field density tests will be taken on the backfill by an independent testing laboratory retained by the Sewerage and Water Board. Each one foot lift shall be compacted at or near optimum moisture content to a minimum of 95% standard Proctor density (ASTM D698) prior to applying the next lift. The test results will be used to verify proper replacement of the backfill prior to pavement restoration.

The costs charged to the Sewerage and Water Board by the testing lab for all failed compaction tests will be deducted from the Contractor's invoice for the repairs.

Regardless of the method of compaction, the Contractor will be responsible for attaining proper compaction as stated herein. Flooding or jetting may cause difficulty in obtaining the required 95% compaction, due to excessive moisture in the soil, and this must be considered when choosing the compaction method. Under no circumstances will the Contractor be allowed to install a lift of backfill over a lift that failed a compaction test.

3.07 MAINTENANCE OF SUB-BASE

The Engineer has the authority to require the Contractor to restore the pavement within a time period less than thirty (30) days, at no additional costs. The Contractor will be informed by the Engineer prior to the beginning of the sewer restoration if it will be necessary to restore the pavement within a lesser period than thirty (30).

3.08 MAINTENANCE OF INTERIM PAVEMENT (SUB-BASE)

Sub-base material shall be placed in the trench at the following thicknesses and shall be maintained continuously by the Contractor until the final pavement is restored:

Concrete roadways: compacted thickness of sub-base shall be no less than pavement thickness.

Asphalt roadways: compacted thickness of sub-base shall be no less than six (6") inches plus the thickness of the asphalt.

All types of pavements with a concrete base: compacted thickness of sub-base shall be no less than the thickness of the composite pavement.

The Contractor shall place the sub-base material immediately after completion of the backfill. The Contractor shall maintain the sub-base continuously for thirty (30) days at no direct pay. The cost of the sub-base material, its placement

and maintenance shall be included in the price bid for sewer repairs. Restoration under contract 30238 will be completed by others.

***END OF SECTION 11 ***

SECTION 12

SURFACE RESTORATION

1.01 MATERIALS AND METHODS

All permanent roadways, sidewalk and driveway shall conform to City of New Orleans Department of Public Work Specifications.

2.01 PAVEMENT REPLACEMENT

In certain instances, the Sewerage and Water Board will have the paved surfaces restored by the Department of Public Work Maintenance. In these cases, the Contractor is not liable for the final paved surface or any claims resulting from pavement failure, unless the Engineer considers any failure of the pavement to be a result of improper or inadequate work performed by the Contractor while restoring the sewer main and backfill. The Contractor will be responsible for maintaining the crushed stone surface, at no direct pay, for a period of 21 days after notifying the Engineer, in writing by telecopy transmission, that the temporary pavement restoration has been completed.

Following backfill of an excavation, unless the Engineer directs the Contractor that surface restoration is to be performed by others, the Contractor must continuously maintain temporary crushed stone or asphalt surface until the Contractor completes permanent surface restoration.

3.01 NOTIFICATION TO STREETS MAINTENANCE DEPARTMENT

The Contractor will be required to arrange a meeting with the Streets Maintenance Department and the Engineer prior to mobilization to a site to allow the Streets Maintenance Department the opportunity to inspect the site in the presence of the Contractor and the Engineer, and to inform the Contractor and the Engineer of the type of restoration that the Department of Streets recommends.

4.01 TYPE OF RESTORATION

When the Contractor is ready to begin the restoration of roadway surfaces, he shall again arrange a meeting with the Engineer and a representative of the Streets Department to make final determination of the amount of surface to be replaced and as to the type of surface replacement.

5.01 MINIMUM RESTORATION REQUIREMENTS

The Contractor will be required to restore neighboring areas to at least the condition that existed prior to their arrival on the jobsite. All work performed on city property will conform to the specifications of the concerned agency. Work on private property will conform to the requirements of the property owner, with the understanding that the Contractor will not be required to restore damaged property beyond that which existed prior to his arrival at the location. The Board will not assume any liability for any suits arising from claims of this nature. The cost of cutting and restoring all surfaces that were damaged as a result of negligence of the Contractor shall be borne by the Contractor and shall conform with the requirements as described in Section B of the General Specifications except where modified by S&WB Drawing 7007-SWB and as noted herein.

6.01 ROADWAY THICKNESSES

The typical allowed thickness for pavements shall be as follows:

asphalt paved roadways	5"
concrete paved roadways	8"
asphalt with concrete base	8" concrete base and 2" of asphalt

The Contractor will be paid for the above thickness only, unless deviations in which the thickness is authorized by the Engineer. The Contractor shall notify the Engineer if; deviations from such typical thickness is necessary, prior to replacing the pavement. At that time, the Engineer will determine the thickness of restoration materials and inform the Contractor of his determinations.

7.01 PAYMENT FOR RESTORATION

Payment for restoration of the roadways will be based upon the prices bid in the proposal. The Contractor will be reimbursed for additional widths and lengths only if they were authorized by the Engineer.

In cases where existing construction joints require additional width or length of cuts, the Contractor must notify the Engineer to receive authorization to remove and replace these sections.

Cutting and restoration of additional widths and lengths, unless previously authorized by the Engineer, will be at the Contractor's expense.

Asphalt tonnage will be based on a unit weight of 145 lbs/cf.

Roadway concrete will be based on a minimum thickness of eight (8) inches.

Additional inches of thickness will be paid in multiples of one-seventh (1/7) the price per square yard of concrete roadway bid in the proposal.

8.01 CURBS, DRIVEWAYS AND SIDEWALKS

Removal and restoration of curbs, driveways and sidewalks shall match existing and shall comply with Department of Streets specifications. These items will be paid for at the prices bid. The prices bid shall include all necessary labor, equipment and materials to install the complete item.

9.01 UNPAVED AREAS

In unpaved areas, surface restoration shall conform to the specifications as listed above with the following exceptions: Batture sand shall be used instead of the top layer of crushed stone. This batture sand shall be compacted by means of a mechanical tamper and shall be maintained by the Contractor. Once it has been determined by the Engineer that settlement in the area is complete, the contractor will be responsible for the procurement, application, and maintenance of grass seeding in a manner that will match the surrounding areas. The grass seeding, and the restoration thereof, shall be in a manner that is acceptable to the Engineer. "Squaring the cut" will not be required for cuts located in unpaved areas. No direct payment for grass seeding will be made, the cost of this work shall be included in the price bid for batture sand.

In some instances, it will be necessary to use sod in place of seeding to match the neighboring area. The price bid for sod shall include all equipment, material and labor for batture sand and sod in place.

10.01 COMPLETION OF PAVEMENT WORK

Once the pavement has been completed, the site has been swept clean of all sand, stone and debris, and all construction equipment and materials removed from the site, the Contractor will be required to fill out a Street Maintenance Form SD500-ML to inform the Streets Maintenance that the job has been completed. It will be the responsibility of the Contractor to deliver this form to the Street Maintenance Yard, 838 S. Genois immediately. There is no direct payment for this item.

END OF SECTION 12

SECTION 13

GEOSPATIAL INFORMATION SERVICES (GIS)

PART 1.0 GENERAL

1.03 SEWERAGE & WATER BOARD OF NEW ORLEANS GIS

The Board has developed an ESRI based Enterprise GIS to manage its utility infrastructure data. This GIS has certain quality and format requirements which must be adhered to including GPS positional accuracy and data format. Bidders must demonstrate the ability to meet these requirements. The Contractor must maintain these requirements continuously throughout the contract period unless otherwise specifically excluded, in writing, by the Engineer.

1.04 PAYMENT

There shall be no direct pay for collecting and submitting the GIS data deliverable. These services shall be included in the unit costs.

PART 2.0 MATERIALS

2.01 GPS LOCATIONS – EQUIPMENT

- A. Positional accuracy is important to The Board. All utility feature inspections should include the capture of GPS positional data. The Board requires the use of “Mapping Grade” GPS equipment capable of sub-foot or better horizontal precision after differential post-processing or through the use of real time kinematics. The Board requires:
- B. Trimble GPS receivers and/or Data collectors or equivalent
- C. A minimum of 20, 1-second positions must be captured using TerraSync™ or equivalent Software and post-processed using Trimble Pathfinder Office Software or required equivalent.
- D. Differential post-processing must include a minimum of 3 Base stations within 100Km of the project site.
- E. Provided GPS data must include, at a minimum, the Receiver Type, GPS Date and Time, Filtered and Unfiltered Number of Positions, Horizontal Precision, and Northing and Easting Coordinate pairs relative to The Board’s Enterprise GIS coordinate projection.
- F. The GPS data collection equipment make, models, serial numbers and manufacturer’s specification sheet including positional capabilities, as well as the names and versions of data collection and differential post-processing or Real Time Kinematics software and a detailed description of the methodology which will be used to meet these requirements must be submitted as part of this bid.

PART 3.0 EXECUTION

3.01 GPS LOCATIONS - DATA FORMAT

- A. GPS data must be collected with sub foot accuracy and delivered in the coordinate projection parameters provided or defined by the Engineer. In addition 'metadata' describing the equipment and post processed accuracy for each inspection and/or collected feature point must be provided. This metadata is to accompany the feature's GIS inspection data format as GIS Related Table(s) and submitted with the inspection GIS. These GIS deliverables must be prepared and submitted in compliance with the following version and format specifications:
- B. Version: All deliverables must be upward and/or backward compatible with the current version of ESRI’s ArcGIS solutions, data and software employed on The Board's network. No submittals prior than (version 10.1) will be accepted.
- C. Format: Only geodatabase structured data will be accepted. Within this format one or more of the following conditions will be adhered to:
 - a. The Board will furnish existing geodatabase format data model schema via geodatabase file and data will be returned in the same.
 - b. If furnished and specifically delineated, existing geodatabase (Feature Class and/or Related Table) format data model schema will be followed and populated. Any recommendations for changes or additions to this geodatabase data model schema must be presented in writing and will be accepted only with approval from the Engineer prior to data deliverables.
 - c. If no existing geodatabase data model schema is furnished by The Board data deliverables will be structured as follows with the approval of the Engineer:
 - D. Feature Class: A geodatabase Feature Class will be designed and developed to hold vital feature information relative to the contracted activities. Specifically a Feature Class will contain Identification, location, Feature-specific static data.
 - a. Identification must include GIS ID (from board provided maps or GIS data).
 - b. Location may include Street Address, Location Description, or other informative data, in addition to GPS data, to allow The Board to easily identify features.

c. Feature-specific static data must be included such as, but not limited to: Latitude, Longitude and Elevation of Manhole casing, Pipe Invert elevation, Pipe Diameter, Pipe Material, Restoration Latitude and Longitude.

d. Related Table(s): In addition to the required Feature Class, Related Tables may be required and/or included in deliverables. Related tables generally contain dynamic 'condition' data related to the Features being inspected. These data are connected within the geodatabase using Relationship Classes which link Dynamic data to Static feature data using a unique (primary) key such as the Unique GIS ID.

3.02 DATA DELIVERABLE SCHEDULE

GIS data deliverables must be prepared and submitted with each invoice or as directed by the Engineer. GIS data deliverables shall be required as supporting documentation for any work performed during an invoicing period.

END OF SECTION 13